



FM/AM DIGITAL SYNTHESIZER TUNER

F-550RDS

HE,HB,HEWZI

- Refer to the service manual ARP2242, F-676/HEWZ type.
- This manual is applicable to the F-550RDS/HE, HB and HEWZI types.

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

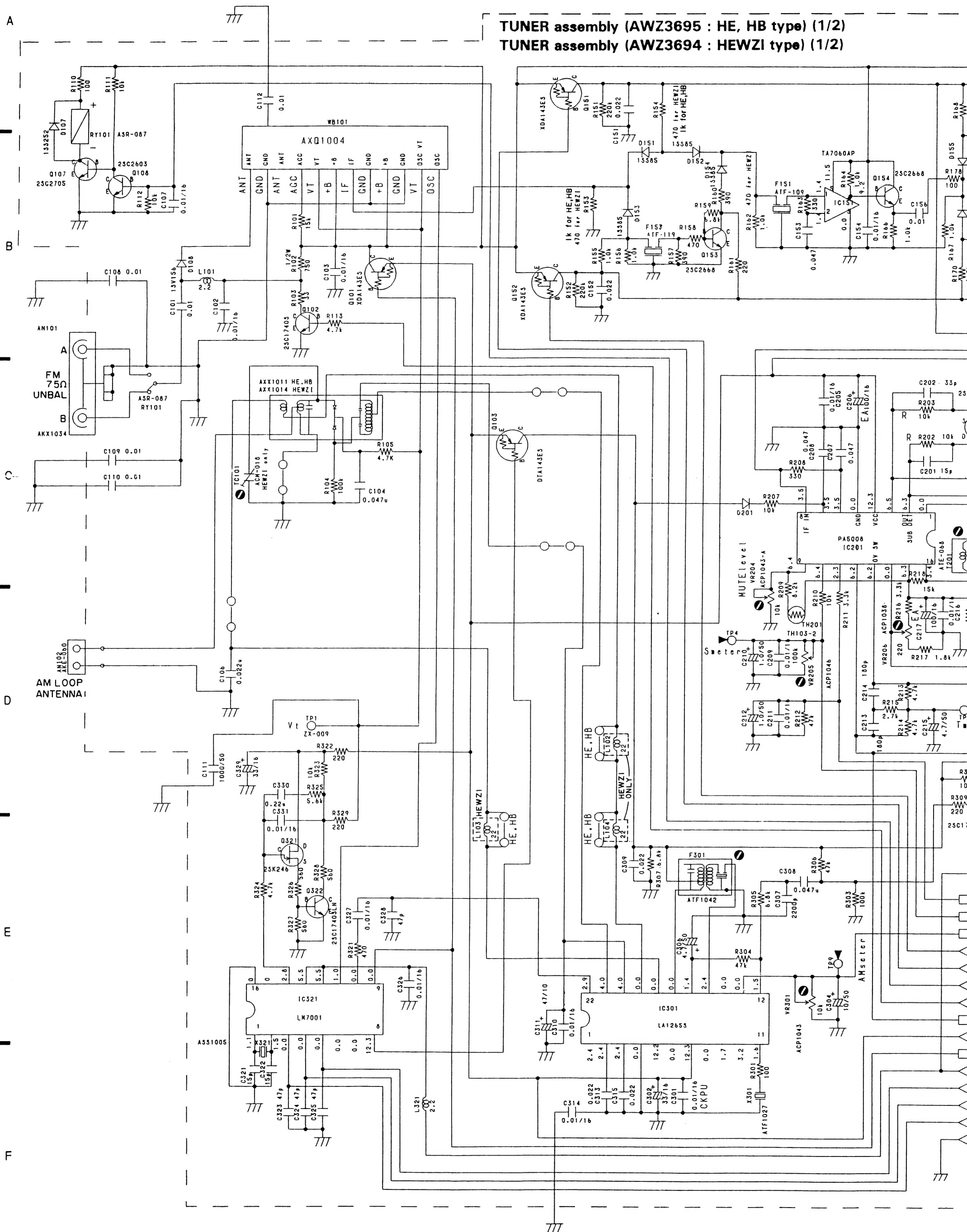
- Part without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

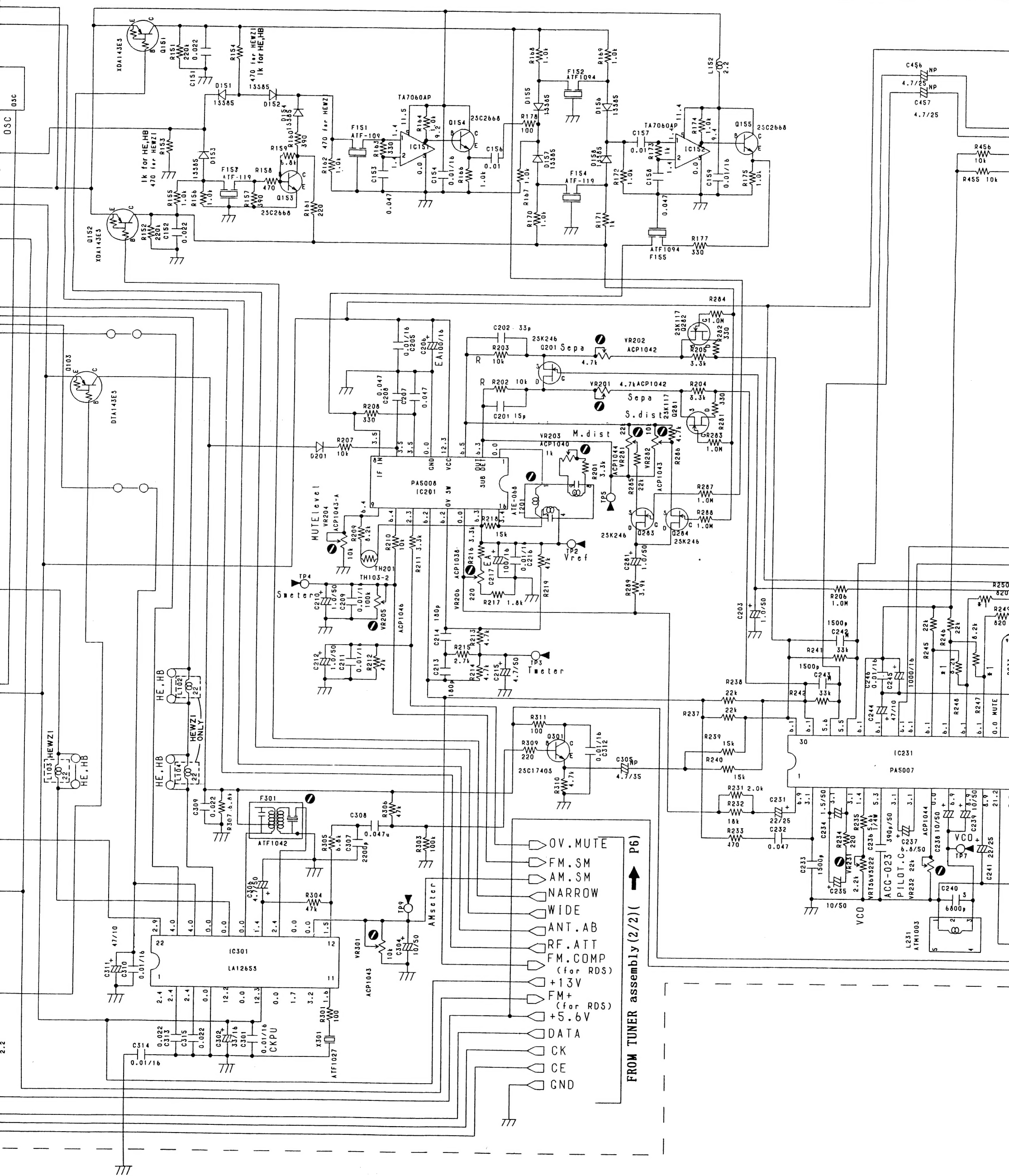
The F – 550RDS/HE, HB and HEWZI types are the same as the F – 676/HEWZ type with the exception of the following sections.

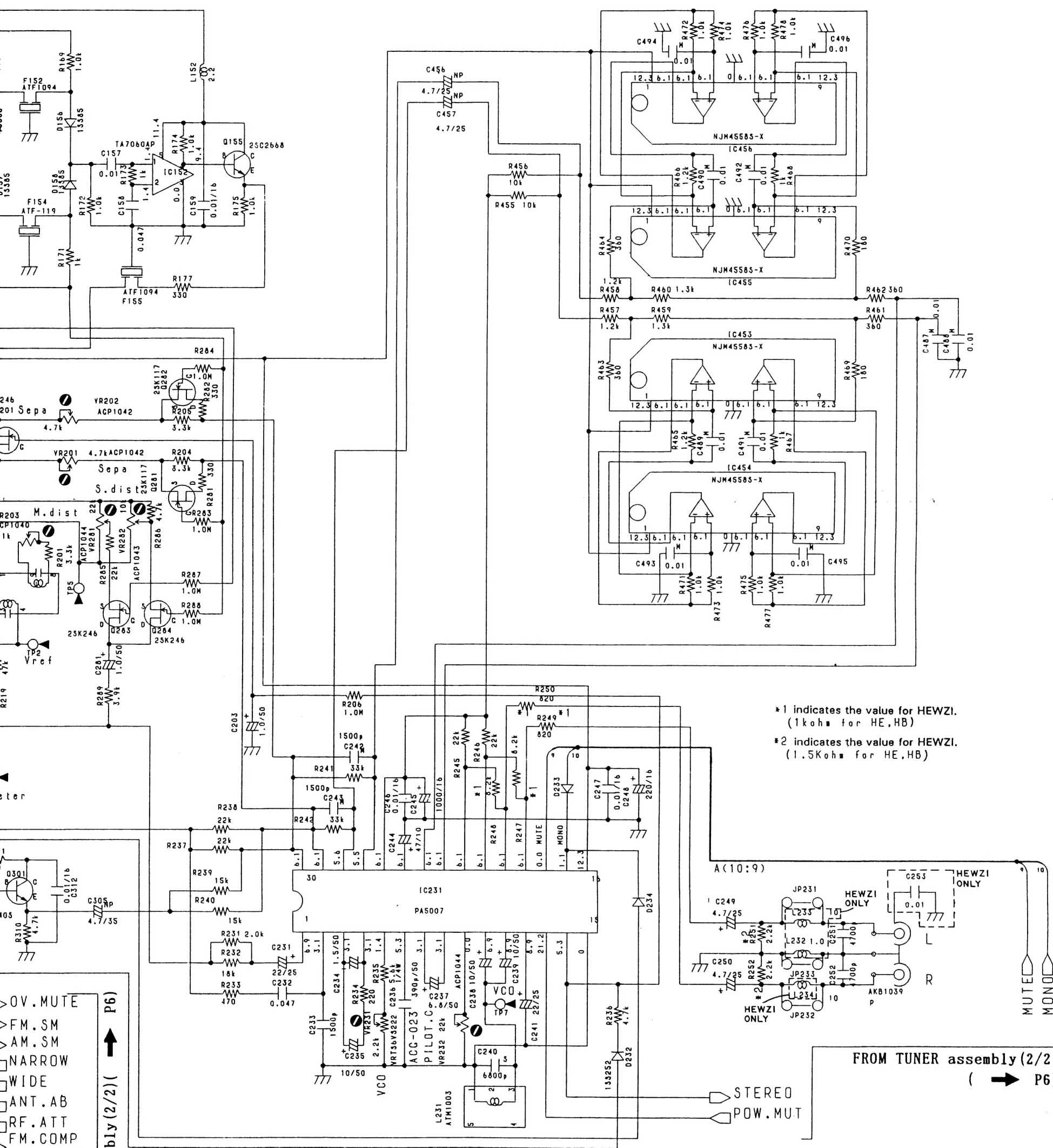
| Mark | Symbol & Description | Part No. | | | | Remarks |
|----------|--|-----------------------|------------------------|------------------------|---------------------------|---------|
| | | F – 676/ HEWZ type | F – 550RDS/ HE type | F – 550RDS/ HB type | F – 550RDS/ HEWZI type | |
| ● | TUNER assembly | AWZ3635 | AWZ3695 | AWZ3695 | AWZ3694 | |
| ● | POWER assembly | AWZ3639 | AWZ3697 | AWZ3697 | AWZ3696 | |
| | DISPLAY assembly | AWP1034 | AWP1038 | AWP1038 | AWP1038 | |
| Δ | AC Power cord | ADG1010 | ADG1021 | ADG1085 | ADG1021 | |
| | Front panel | ANB1449 | ANB1481 | ANB1481 | ANB1481 | |
| | Panel base | AMB1815 | AMB1841 | AMB1841 | AMB1841 | |
| | Screw (EARTH) | ABA1047 | ..... | ..... | ABA1047 | |
| | Packing case | AHD2053 | AHD2106 | AHD2106 | AHD2106 | |
| | Operating instructions (German, Italian) | ARC1263 | ..... | ..... | ARC1283 | |
| | Operating instructions (English, French, German, Italian, Dutch, Swedish, Spanish, Portugues) | ..... | ARE1205 | ..... | ..... |  |
| | Operating instructions (English) | ..... | ..... | ARB1326 | ..... |  |
| | Connection cord with mini plug | ..... | ADE – 085 | ADE – 085 | ADE – 085 | |

2. SCHEMATIC AND P.C.BOARDS CONNECTION DIAGRAM

2.1 SCHEMATIC DIAGRAM OF TUNER ASSEMBLY (1/2)







*2 indicates the value for HEWZI.
(1.5Kohm for HE, HB)

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(1.5Kohm for HE, HB)

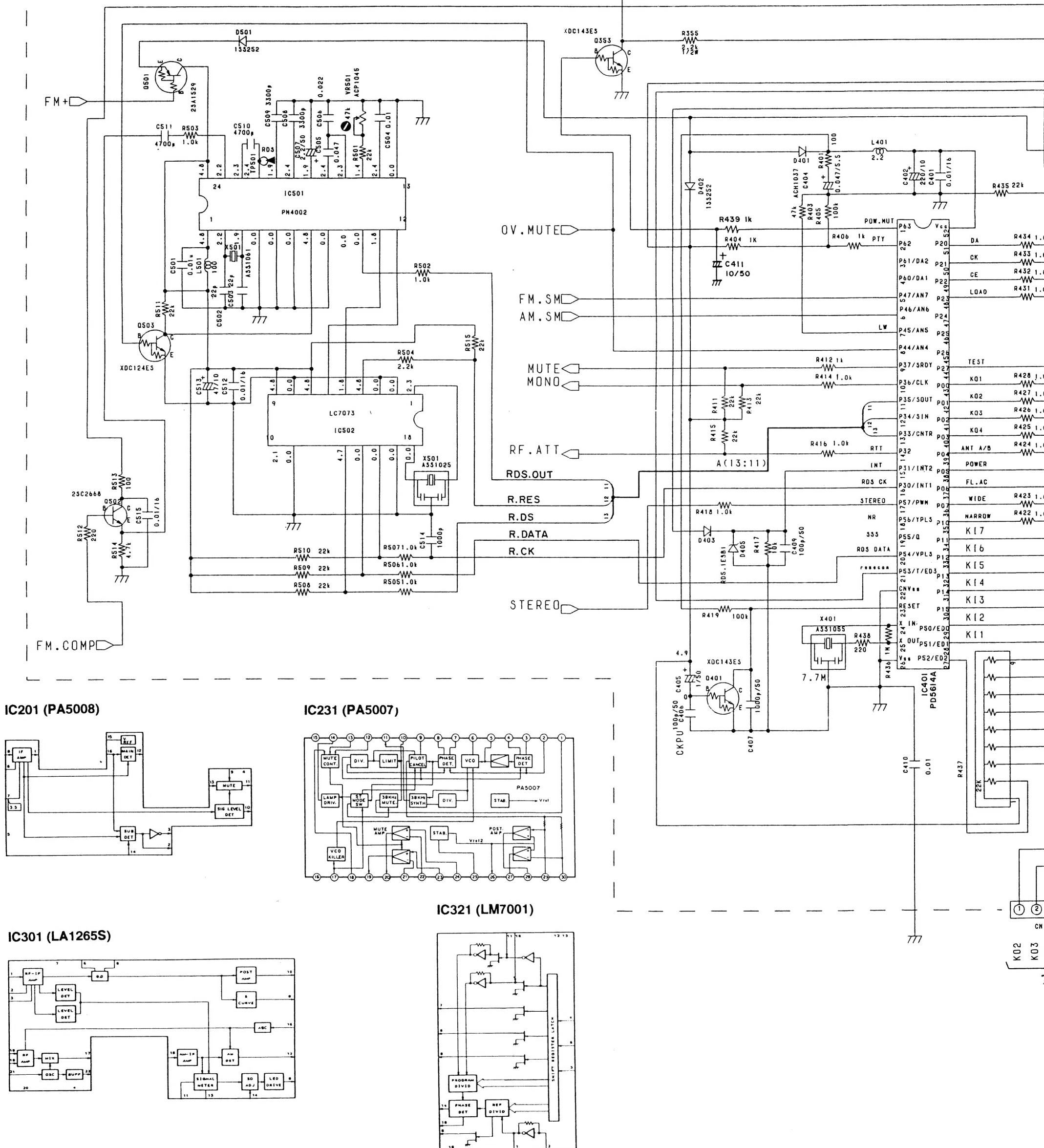
A(10:9)

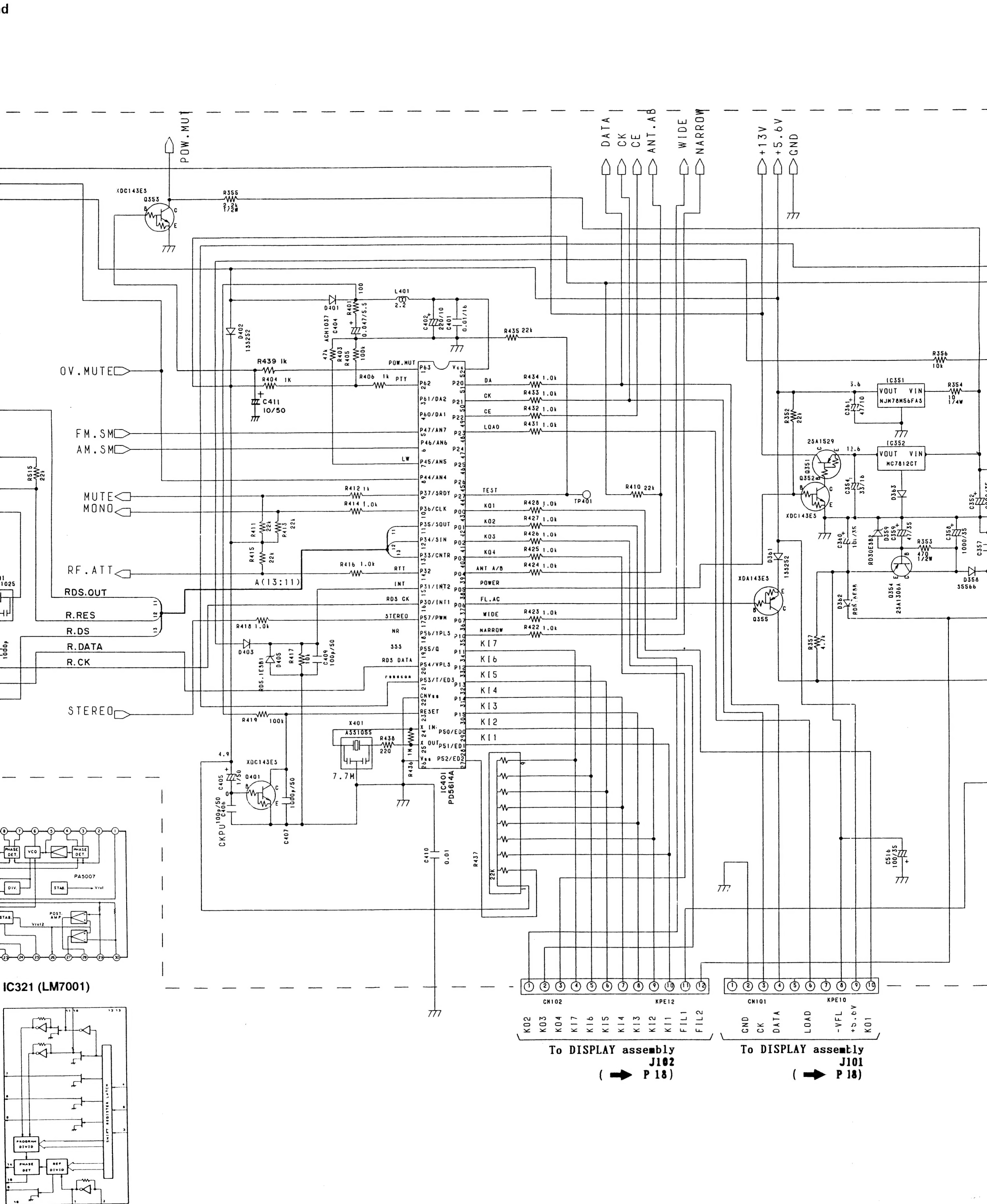
FROM TUNER assembly (2/2)
(➡ P6)

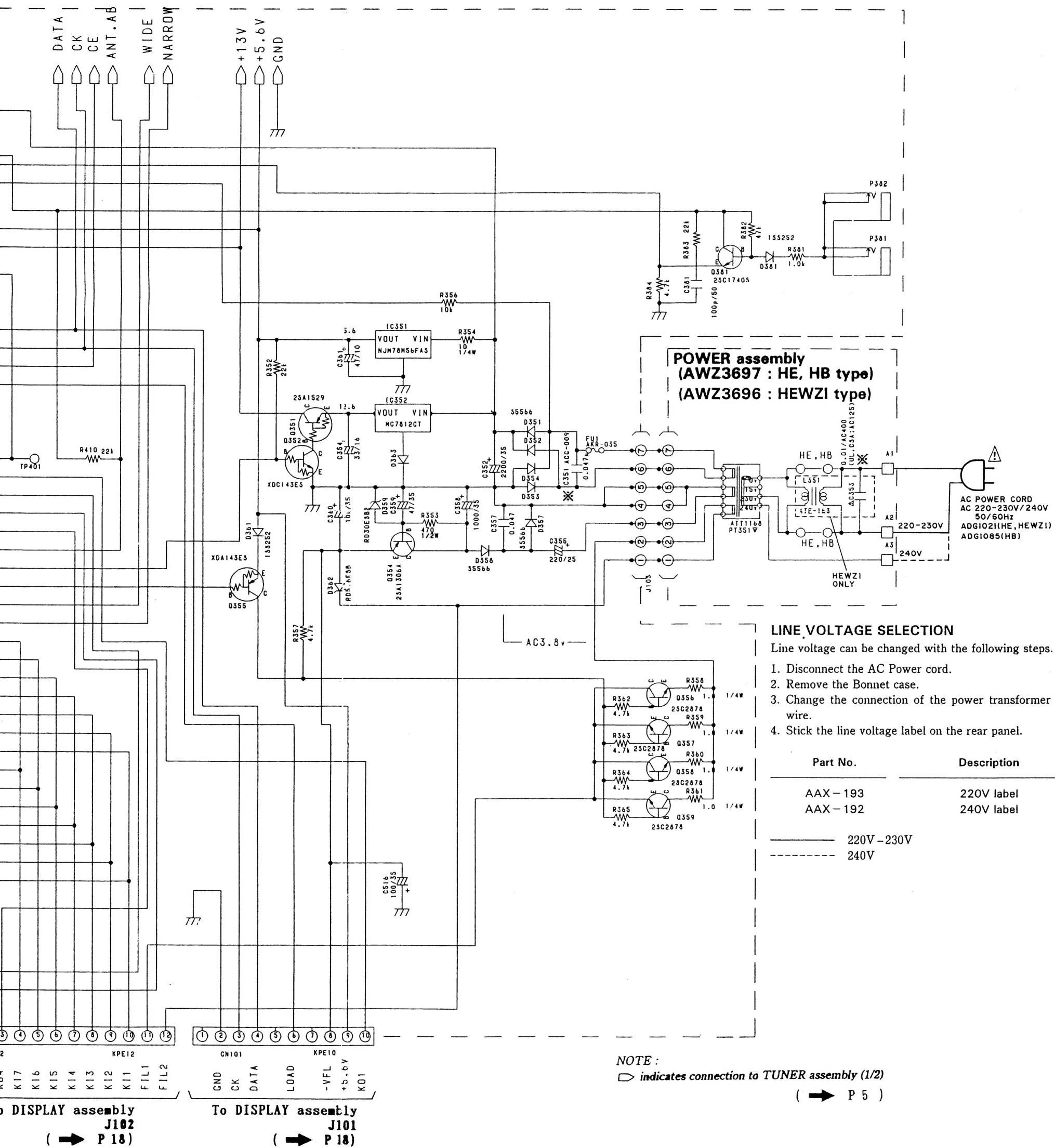
STEREO
POW. MUT.

FROM TUNER assembly (2/2) (**➡** P6)

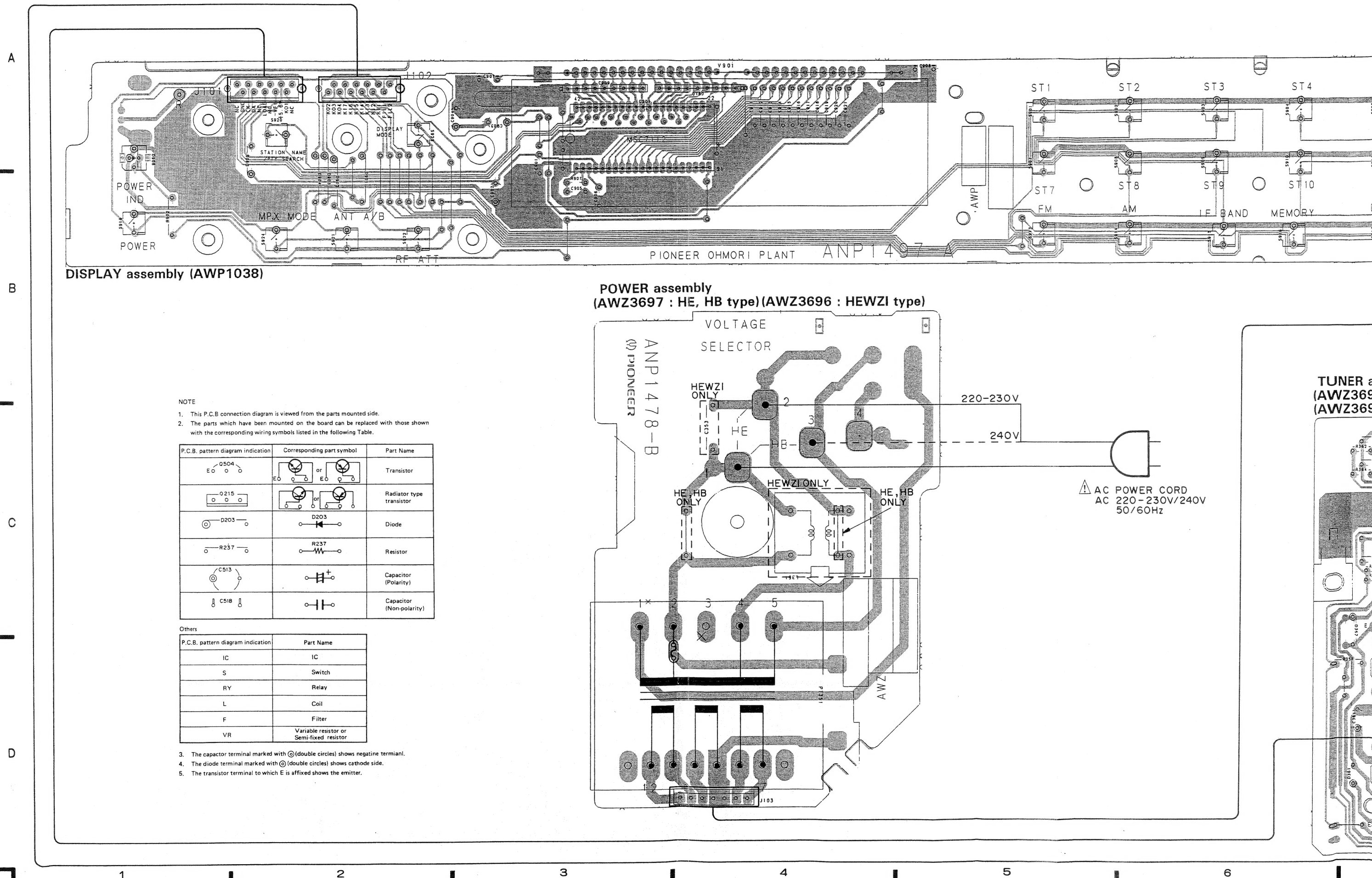
- ☐ OV. MUTE
- ☐ FM. SM
- ☐ AM. SM
- ☐ NARROW
- ☐ WIDE
- ☐ ANT. AB
- ☐ RF. ATT
- ☐ FM. COMP (for RDS)
- ☐ +13V
- ☐ FM+ (for RDS)
- ☐ +5.6V
- ☐ DATA
- ☐ CK
- ☐ CE
- ☐ GND

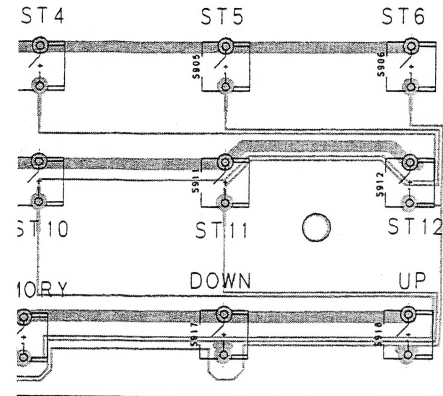
2.2 SCHEMATIC DIAGRAM OF TUNER ASSEMBLY (2/2) and
POWER ASSEMBLY (AWZ3697)TUNER assembly (AWZ3695 : HE, HB type) (2/2)
TUNER assembly (AWZ3694 : HEWZI type) (2/2)





2.3 PCB CONNECTION DIAGRAMS





TUNER assembly
(AWZ3695 : HE, HB type)
(AWZ3694 : HEWZI type)

FOR CONTINUED PROTECTION,
AGAINST FIRE HAZARD,
REPLACEMENT FUSES SHOULD
BE OF THE SAME TYPE AND

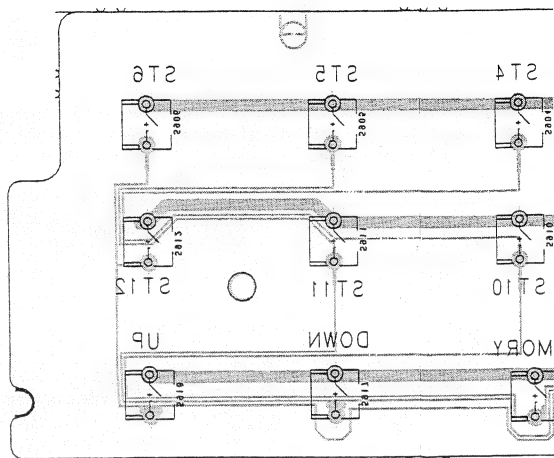
ANP 1478-P

A

B

C

D



CAUTION
FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD,
REPLACEMENT FUSES SHOULD
BE OF THE SAME TYPE AND
RATING AS ORIGINALS.

SWA

C

8



2.4 SCHEMATIC DIAGRAM OF DISPLAY ASSEMBLY (AWP1038)

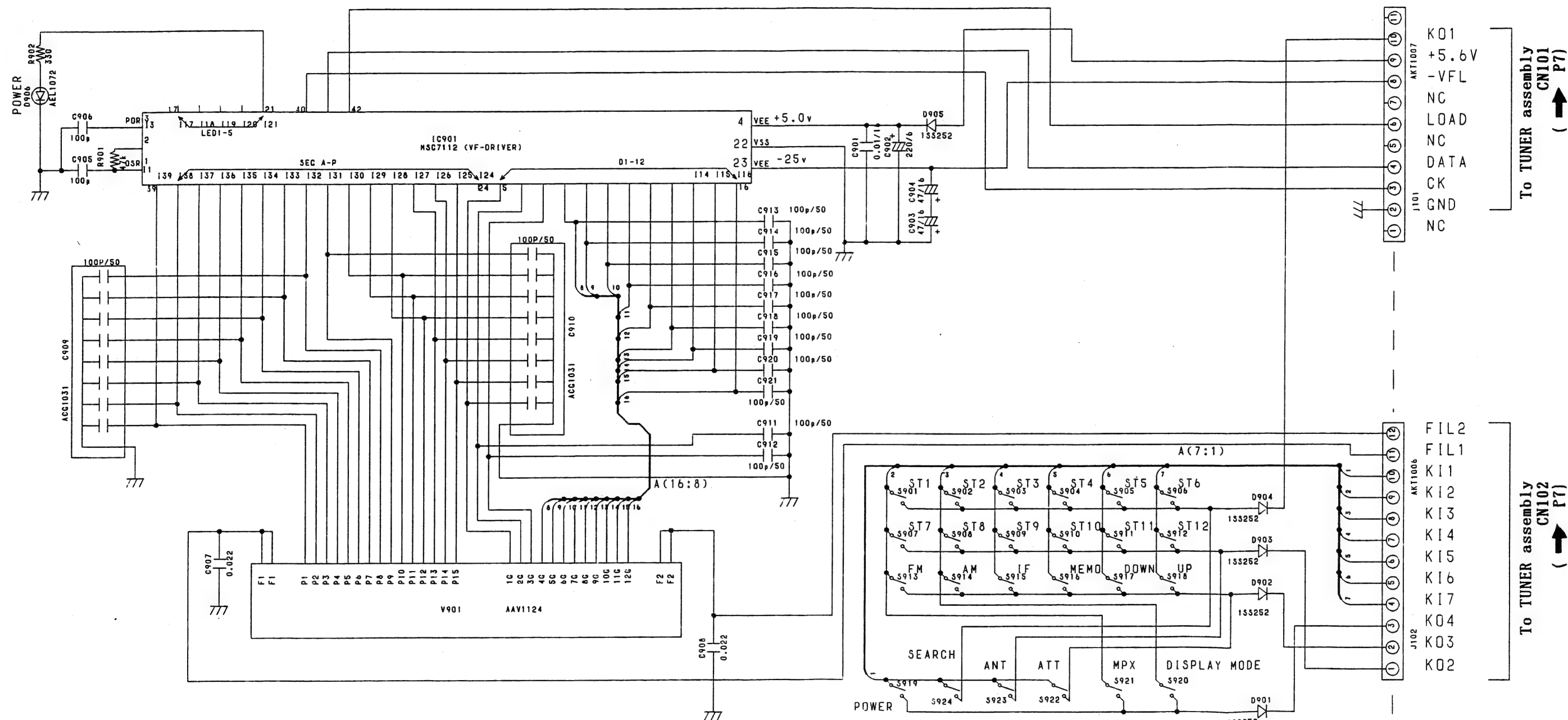
A

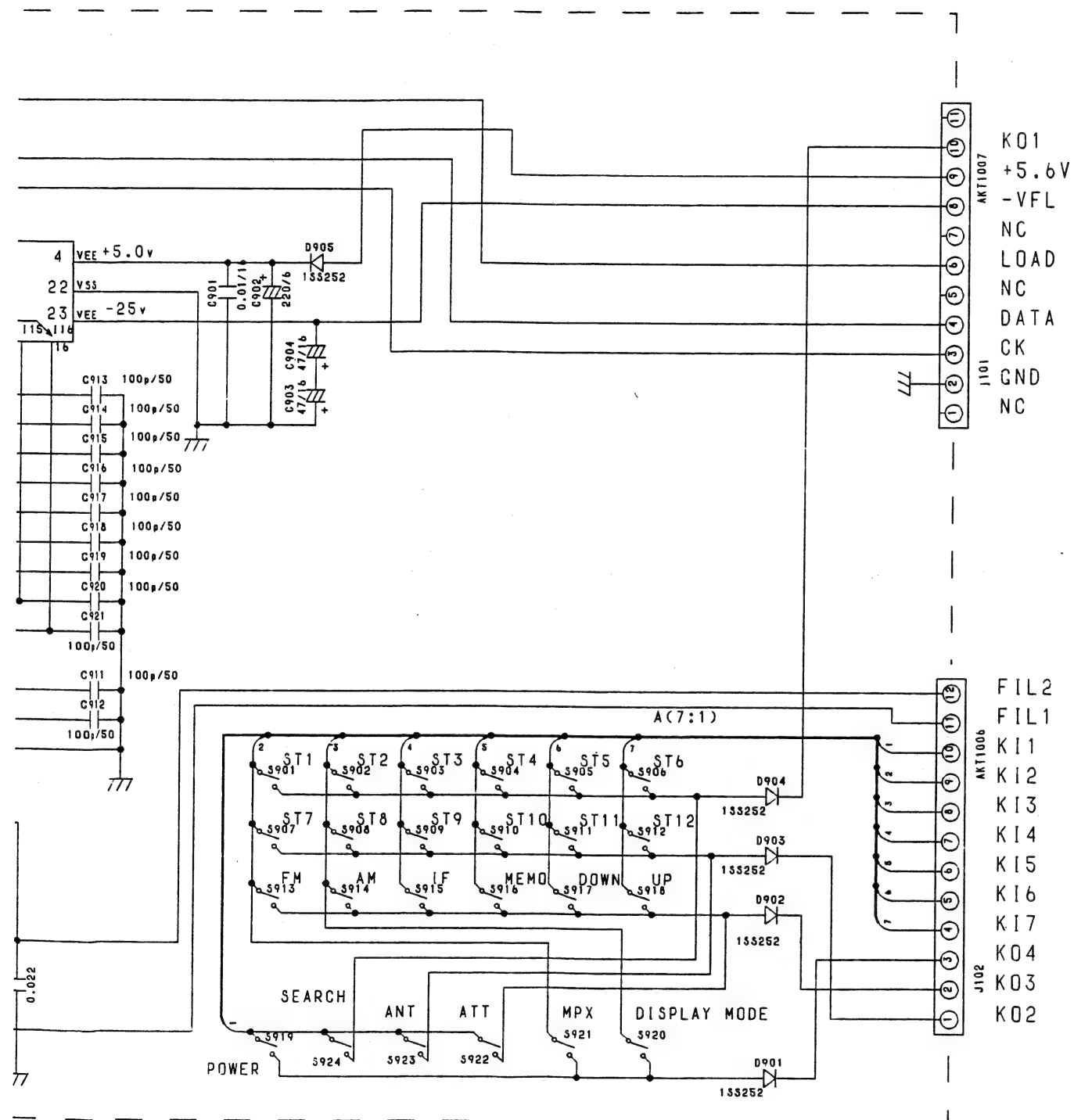
DISPLAY assembly (AWP1038)

B

C

D





- RESISTORS :**
Indicated in Ω , $1/4W$, $1/8W$, $\pm 5\%$ tolerance unless otherwise noted k; k Ω , M; M Ω , (F); $\pm 1\%$, (G); $\pm 2\%$, (K); $\pm 10\%$, (M); $\pm 20\%$ tolerance.
- CAPACITORS :**
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE CURRENT :**
mA; DC current at no input signal.
mV; Signal voltage at FM 400Hz ± 75 Hz DEV.
• The table in the margin shows the DC voltage at no signal.
- OTHERS :**
→; Signal route.
⊗; Adjusting point.
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.

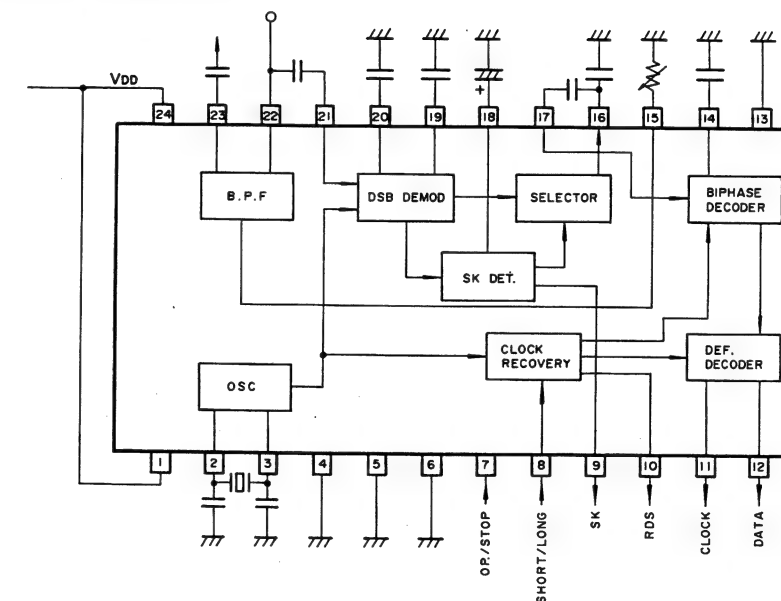
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES

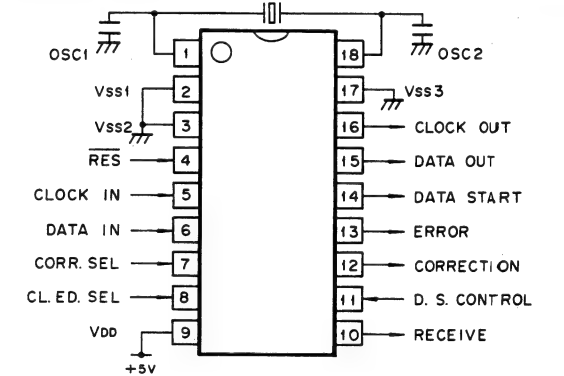
DISPLAY assembly

| | | | |
|------|------|------|--------------|
| S901 | ST1 | S913 | FM |
| S902 | ST2 | S914 | AM |
| S903 | ST3 | S915 | IF |
| S904 | ST4 | S916 | MEMO |
| S905 | ST5 | S917 | DOWN |
| S906 | ST6 | S918 | UP |
| S907 | ST7 | S919 | POWER |
| S908 | ST8 | S920 | DISPLAY MODE |
| S909 | ST9 | S921 | MPX |
| S910 | ST10 | S922 | ATT |
| S911 | ST11 | S923 | ANT |
| S912 | ST12 | S924 | SEARCH |

IC501 (PM4002)



IC502 (LC7073)



1. RESISTORS :

Indicated in Ω , $1/4W$, $1/8W$, $\pm 5\%$ tolerance unless otherwise noted k ; k Ω , M ; M Ω , (F) ; $\pm 1\%$, (G) ; $\pm 2\%$, (K) ; $\pm 10\%$, (M) ; $\pm 20\%$ tolerance.

2. CAPACITORS :

Indicated in capacity (μF) / voltage (V) unless otherwise noted p ; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT :

mA ; DC current at no input signal.

mV ; Signal voltage at FM 400Hz ± 75 Hz DEV.

• The table in the margin shows the DC voltage at no signal.

4. OTHERS :

→ ; Signal route.

⊗ ; Adjusting point.

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

※ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES

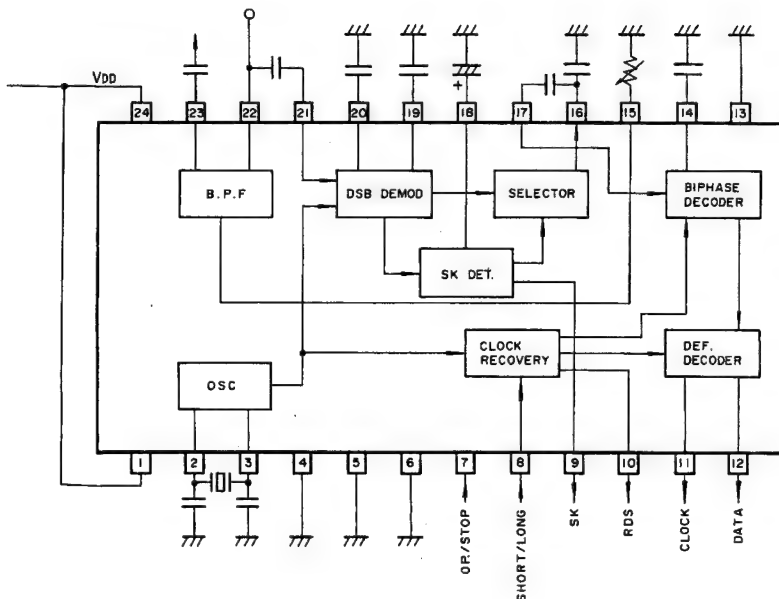
DISPLAY assembly

| | | | |
|------|------|------|--------------|
| S901 | ST1 | S913 | FM |
| S902 | ST2 | S914 | AM |
| S903 | ST3 | S915 | IF |
| S904 | ST4 | S916 | MEMO |
| S905 | ST5 | S917 | DOWN |
| S906 | ST6 | S918 | UP |
| S907 | ST7 | S919 | POWER |
| S908 | ST8 | S920 | DISPLAY MODE |
| S909 | ST9 | S921 | MPX |
| S910 | ST10 | S922 | ATT |
| S911 | ST11 | S923 | ANT |
| S912 | ST12 | S924 | SEARCH |

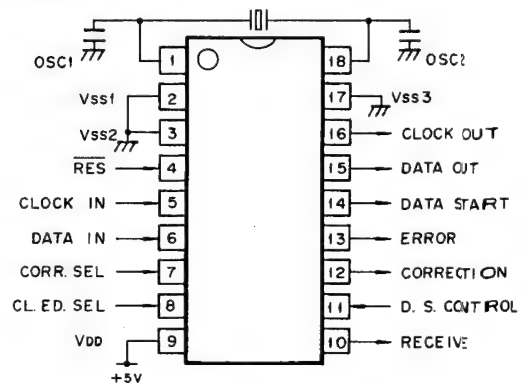
A

B

IC501 (PM4002)



IC502 (LC7073)



C

D

3. PCB's PARTS LIST

3.1 FOR F-550RDS/HE AND HB TYPES

NOTES:

- Part without part number cannot be supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω 56 $\times 10^1$ 561.....RD1/8PM \square \square \square J
 47k Ω 47 $\times 10^3$ 473.....RD1/4PS \square \square \square J
 0.5 Ω 0R5.....RN2H \square \square \square K
 1 Ω 010.....RSIP \square \square \square K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω 562 $\times 10^1$ 5621.....RN1/4SR \square \square \square F

| Mark No. | Description | Parts No. | Mark No. | Description | Parts No. |
|----------------------------|---------------|-------------|---------------------|-------------------|------------------------|
| ● TUNER ASSEMBLY (AWZ3695) | | | Q501 | TRANSISTOR | 2SA1529 |
| SEMICONDUCTORS | | | Q502 | TRANSISTOR | 2SC2668 |
| IC151, 152 | AMPLIFIER IC | TA7060AP | Q503 | TRANSISTOR | XDC124ES |
| IC201 | FM IC | PA5008 | D107 | DIODE | 1SS252 |
| IC231 | MPX IC | PA5007 | D108 | DIODE | 1SV156 |
| IC301 | AM/FM IC | LA1265S | D151-158 | DIODE | 1SS85 |
| IC321 | PLL IC | LM7001 | D201 | DIODE | 1SS252 |
| IC351 | REGULATOR IC | NJM78M56FAS | D232-234 | DIODE | 1SS252 |
| IC352 | REGULATOR IC | MC7812CT | Δ D351-354 | DIODE | S5566 |
| IC401 | TUNER CONTROL | PD5164A | Δ D357, 358 | DIODE | S5566 |
| | μ -COM | | D359 | ZENER DIODE | RD30ESB2 |
| IC453-456 | OP-AMP IC | NJM4558S-X | D361 | DIODE | 1SS252 |
| IC501 | RDS | PM4002 | D362 | ZENER DIODE | RD5.6ESB |
| IC502 | RDS | LC7073 | D363, 381 | DIODE | 1SS252 |
| Q101 | TRANSISTOR | XDA143ES | D401-403 | DIODE | 1SS252 |
| Q102 | TRANSISTOR | 2SC1740S | D405 | ZENER DIODE | RD5.1ESB1 |
| Q103 | TRANSISTOR | XDA143ES | D501 | DIODE | 1SS252 |
| Q107 | TRANSISTOR | 2SC2705 | RELAY | | |
| Q108 | TRANSISTOR | 2SC2603 | RY101 | RELAY | ASR-087 |
| Q151, 152 | TRANSISTOR | XDA143ES | COILS & TRANSFORMER | | |
| Q153-155 | TRANSISTOR | 2SC2668 | F151 | CERAMIC FILTER | ATF-109 |
| Q201 | N-FET | 2SK246 | F152 | CERAMIC FILTER | ATF1094 |
| Q281, 282 | N-FET | 2SK117 | F153, 154 | CERAMIC FILTER | ATF-119 |
| Q283, 284 | N-FET | 2SK246 | F155 | CERAMIC FILTER | ATF1094 |
| Q301 | TRANSISTOR | 2SC1740S | F301 | CERAMIC FILTER | ATF1042 |
| Q321 | N-FET | 2SK246 | L101, 152 | AXIAL INDUCTOR | LAU2R2M |
| Q322 | TRANSISTOR | 2SC1740SLN | L231 | COIL | ATM1003 |
| Q351 | TRANSISTOR | 2SA1529 | L321 | AXIAL INDUCTOR | LAU2R2M |
| Q352, 353 | TRANSISTOR | XDC143ES | L501 | AXIAL INDUCTOR | LAU101K |
| Q354 | TRANSISTOR | 2SA1306A | T201 | IF TRANSFORMER | ATE-068 |
| Q355 | TRANSISTOR | XDA143ES | CAPACITORS | | |
| Q356-359 | TRANSISTOR | 2SC2878 | C101 | CERAMIC CAPACITOR | CKDYX10 \square M25 |
| Q381 | TRANSISTOR | 2SC1740S | C102, 103 | CERAMIC CAPACITOR | CKPUYY10 \square M16 |
| Q401 | TRANSISTOR | XDC143ES | | | |

| Mark No. | Description | Parts No. | Mark No. | Description | Parts No. |
|-----------|----------------------|--------------|-----------|----------------------|--------------|
| C104 | CERAMIC CAPACITOR | CKDYF473Z50 | C304 | ELECTR.CAPACITOR | CEAS100M50 |
| C106 | CERAMIC CAPACITOR | CKDYF223Z50 | C305 | ELECTR.CAPACITOR | CEANP4R7M35 |
| C107 | CERAMIC CAPACITOR | CKPUYY103M16 | | | |
| C108-110 | CERAMIC CAPACITOR | CKDYX103M25 | C306 | ELECTR.CAPACITOR | CEAS4R7M50 |
| C111 | CERAMIC CAPACITOR | CKPUYB102K50 | C307 | CERAMIC CAPACITOR | CKDYB222K50 |
| C112 | CERAMIC CAPACITOR | CKDYX103M25 | C308 | CERAMIC CAPACITOR | CKDYX473M25 |
| C151, 152 | CERAMIC CAPACITOR | CKDYF223Z50 | C309 | CERAMIC CAPACITOR | CKDYF223Z50 |
| C153 | CERAMIC CAPACITOR | CKDYX473M25 | C310 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C154 | CERAMIC CAPACITOR | CKPUYY103M16 | C311 | ELECTR.CAPACITOR | CEAS470M10 |
| C156, 157 | CERAMIC CAPACITOR | CKDYX103M25 | C312 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C158 | CERAMIC CAPACITOR | CKDYX473M25 | C313 | CERAMIC CAPACITOR | CKDYF223Z50 |
| C159 | CERAMIC CAPACITOR | CKPUYY103M16 | C314 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C201 | CERAMIC CAPACITOR | CCMCH150J50 | C315 | CERAMIC CAPACITOR | CKDYF223Z50 |
| C202 | CERAMIC CAPACITOR | CCMCH330J50 | C321, 322 | CERAMIC CAPACITOR | CCMCH150J50 |
| C203 | ELECTR.CAPACITOR | CEAS010M50 | C323-325 | AXIAL CERAMIC C. | CCPUSL470J50 |
| C205 | CERAMIC CAPACITOR | CKPUYY103M16 | C326, 327 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C206 | ELECTROLYTIC CAPACIT | CEEA101M16 | C328 | AXIAL CERAMIC C. | CCPUSL470J50 |
| C207, 208 | CERAMIC CAPACITOR | CKDYX473M25 | C329 | ELECTR.CAPACITOR | CEAS330M16 |
| C209 | CERAMIC CAPACITOR | CKPUYY103M16 | C330 | AUDIO FILM CAPACITOR | CFTXA224J50 |
| C210 | ELECTR.CAPACITOR | CEAS010M50 | C331 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C211 | CERAMIC CAPACITOR | CKPUYY103M16 | △ C351 | CAPACITOR (0.047μ) | ACG-009-0 |
| C212 | ELECTR.CAPACITOR | CEAS010M50 | C352 | ELECTROLYTIC CAPACIT | CEEA222M35 |
| C213, 214 | CERAMIC CAPACITOR | CKMYB181K50 | C354 | ELECTR.CAPACITOR | CEAS330M16 |
| C215 | ELECTR.CAPACITOR | CEAS4R7M50 | C355 | ELECTR.CAPACITOR | CEAS221M25 |
| C216 | CERAMIC CAPACITOR | CKPUYY103M16 | C357 | CERAMIC CAPACITOR | CKDYF473Z50 |
| C217 | ELECTROLYTIC CAPACIT | CEEA101M16 | C358 | ELECTROLYTIC CAPACIT | CEAS102M35 |
| C231 | ELECTR.CAPACITOR | CEAS220M25 | C359 | ELECTROLYTIC CAPACIT | CEAS470M35 |
| C232 | AUDIO FILM CAPACITOR | CFTXA473J50 | C360 | ELECTR.CAPACITOR | CEAS101M35 |
| C233 | CERAMIC CAPACITOR | CKDYB152K50 | C361 | ELECTR.CAPACITOR | CEAS470M10 |
| C234 | ELECTROLYTIC CAPACIT | CEAS1R5M50 | C381 | CERAMIC CAPACITOR | CKPUYB101K50 |
| C235 | ELECTR.CAPACITOR | CEAS100M50 | C401 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C236 | CKA (390P/50V) | ACG-023 | C402 | ELECTR.CAPACITOR | CEAS221M10 |
| C237 | ELECTROLYTIC CAPACIT | CEAS6R8M50 | C404 | CEA (47000/5.5V) | ACH1037 |
| C238, 239 | ELECTR.CAPACITOR | CEAS100M50 | C405 | ELECTR.CAPACITOR | CEAS010M50 |
| C240 | PL.STYRENE CAPACITOR | CQSA682J50 | C406 | CERAMIC CAPACITOR | CKPUYB101K50 |
| C241 | ELECTR.CAPACITOR | CEAS220M25 | C407 | CERAMIC CAPACITOR | CKPUYB102K50 |
| C242, 243 | MYLOR FILM CAPACITOR | CQMA152J50 | C409 | CERAMIC CAPACITOR | CKPUYB101K50 |
| C244 | ELECTR.CAPACITOR | CEAS470M10 | C410 | CERAMIC CAPACITOR | CKDYX103M25 |
| C245 | ELECTROLYTIC CAPACIT | CEEA102M16 | C411 | ELECTR.CAPACITOR | CEAS101M50 |
| C246, 247 | CERAMIC CAPACITOR | CKPUYY103M16 | C456, 457 | ELECTROLYTIC CAPACIT | CEEANP4R7M25 |
| C248 | ELECTROLYTIC CAPACIT | CEEA221M16 | C487-496 | MYLOR FILM CAPACITOR | CQMA103J50 |
| C249, 250 | ELECTROLYTIC CAPACIT | CEEA4R7M25 | C501 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C251, 252 | CERAMIC CAPACITOR | CKDYB472K50 | C502, 503 | CERAMIC CAPACITOR | CCDCH120J50 |
| C281 | ELECTR.CAPACITOR | CEAS010M50 | C504 | CERAMIC CAPACITOR | CKDYX103M25 |
| C301 | CERAMIC CAPACITOR | CKPUYY103M16 | C505 | CERAMIC CAPACITOR | CKDYX173M25 |
| C302 | ELECTR.CAPACITOR | CEAS330M16 | C506 | CERAMIC CAPACITOR | CKDYX23M25 |
| | | | C507 | ELECTR.CAPACITOR | CEAS222M50 |
| | | | C508, 509 | CERAMIC CAPACITOR | CKDYB132K50 |
| | | | C510, 511 | CERAMIC CAPACITOR | CKDYB172K50 |
| | | | C512 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | | | C513 | ELECTR.CAPACITOR | CEAS470M10 |

| Mark No. | Description | Parts No. |
|----------|-------------------|--------------|
| C514 | CERAMIC CAPACITOR | CKDYB102K50 |
| C515 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C516 | ELECTR.CAPACITOR | CEAS101M35 |

RESISTORS

| | | |
|------------|----|------------|
| VR201, 202 | VR | ACP1042 |
| VR203 | VR | ACP1040 |
| VR204 | VR | ACP1043 |
| VR205 | VR | ACP1046 |
| VR206 | VR | ACP1038 |
| VR231 | VR | VRTS6VS222 |
| VR232, 281 | VR | ACP1044 |
| VR282, 301 | VR | ACP1043 |
| VR501 | VR | ACP1045 |

| | | |
|-----------|----------------------|--------------|
| R102 | CARBON FILM RESISTOR | RD1/2PM751J |
| R202, 203 | CARBON FILM RESISTOR | RDR1/4PM103J |
| R204, 205 | CARBON FILM RESISTOR | RDR1/4PM332J |
| R235 | METALFILM RESISTER | RN1/4PQ5601F |
| R237, 238 | CARBON FILM RESISTOR | RDR1/4PM223J |

| | | |
|-----------|----------------------|--------------|
| R241, 242 | CARBON FILM RESISTOR | RDR1/4PM333J |
| R245, 246 | CARBON FILM RESISTOR | RDR1/4PM333J |
| R247-250 | CARBON FILM RESISTOR | RDR1/4PM102J |
| R251, 252 | CARBON FILM RESISTOR | RDR1/4PM152J |
| R281, 282 | CARBON FILM RESISTOR | RDR1/4PM331J |

| | | |
|----------|----------------------|--------------|
| R353 | CARBONFILM RESISTOR | RD1/2PM471J |
| R354 | FUSIBLE RESISTOR | RFA1/4PS100J |
| R355 | CARBON FILM RESISTOR | RD1/2PM222J |
| R358-361 | CARBON FILM RESISTOR | RD1/4PM010J |
| R437 | RESISTOR ARRAY(22K) | RA8T223J |

| | | |
|-----------|----------------------|--------------|
| R455, 456 | CARBON FILM RESISTOR | RDR1/6PU103J |
| R457, 458 | CARBON FILM RESISTOR | RDR1/4PM122J |
| R459, 460 | CARBON FILM RESISTOR | RDR1/4PM132J |
| R461-464 | CARBON FILM RESISTOR | RDR1/4PM361J |
| R465, 466 | CARBON FILM RESISTOR | RDR1/6PU122J |

| | | |
|-----------|----------------------|--------------|
| R467, 468 | CARBON FILM RESISTOR | RDR1/6PU102J |
| R469, 470 | CARBON FILM RESISTOR | RDR1/4PM181J |
| R471-478 | CARBON FILM RESISTOR | RDR1/6PU102J |

| Mark No. | Description | Parts No. |
|----------|-----------------|-------------|
| | Other resistors | RD1/8PM□□□J |

OTHERS

| | |
|-------------------------------|---------|
| PIN JACK 2P (OUTPUT) | AKB1039 |
| TERMINAL 2-P (ANTENNA) | AKE-060 |
| JACK (CONTROL) | AKN-207 |
| SOCKET (ANTENNA FM) | AKX1034 |
| 4 SERIAL F.E. MODULE ASSEMBLY | AXQ1004 |
| AM RF TUNING BLOCK | AXX1011 |

| | | |
|-------|----------------|-------|
| CN101 | CONNECTOR(10P) | KPE10 |
| CN102 | CONNECTOR(12P) | KPE12 |

| | | |
|------|-------------------|---------|
| X301 | CERAMIC RESONATOR | ATF1027 |
| X321 | CRYSTAL RESONATOR | ASS1005 |
| X401 | CERAMIC RESONATOR | ASS1055 |
| X501 | CRYSTAL RESONATOR | ASS1061 |
| X502 | CERAMIC RESONATOR | ASS1025 |

| | | |
|-------|------------|---------|
| TH201 | THERMISTOR | TH103-2 |
|-------|------------|---------|

● POWER ASSEMBLY (AWZ3697)

TRANSFORMER

| | | |
|--------|-------------------|---------|
| △ T351 | POWER TRANSFORMER | ATT1168 |
|--------|-------------------|---------|

DISPLAY ASSEMBLY (AWP1038)

SEMICONDUCTORS

| | | |
|----------|--------------|--------------|
| IC901 | FL DRIVER IC | MSC7112-01SS |
| D901-905 | DIODE | 1SS252 |
| D906 | LED | AEL1072 |

SWITCHES

| | | |
|----------|--------|---------|
| S901-924 | SWITCH | ASG1034 |
|----------|--------|---------|

CAPACITORS

| | | |
|-----------|---------------------------|--------------|
| C901 | CERAMIC CAPACITOR | CKPUYY103M16 |
| C902 | ELECTR.CAPACITOR | CEJA221M6 |
| C903, 904 | ELECTROLYTIC CAPACIT | CEJA470M16 |
| C905, 906 | CERAMIC CAPACITOR | CKPUYB101K50 |
| C907, 908 | CERAMIC CAPACITOR | CKDYF223Z50 |
| C909, 910 | CAPACITOR ARRAY (100p/50) | ACG1031 |
| C911-921 | CERAMIC CAPACITOR | CKPUYB101K50 |

RESISTORS

| | |
|---------------|-------------|
| All resistors | RD1/8PM□□□J |
|---------------|-------------|

OTHERS

| | | |
|------|---------|---------|
| V901 | FL TUBE | AAV1124 |
|------|---------|---------|

3.2 FOR F – 550RDS/HEWZI TYPE

NOTES:

- Part without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

● TUNER assembly (AWZ3694)

The TUNER assembly (AWZ3694) is the same as the TUNER assembly (AWZ3695) with the exception of the following sections.

| Mark | Symbol & Description | Part No. | | Remarks |
|------|----------------------|--------------|--------------|---------|
| | | AWZ3695 | AWZ3694 | |
| | L102 – L104 | ..... | LAU220K | |
| | L232 | ..... | LAU010M | |
| | L233, L234 | ..... | LAU100K | |
| | TC101 | ..... | ACM – 018 | |
| | C253 | ..... | CKDYX103M25 | |
| | R153, R154, R162 | RD1/8PM102J | RD1/8PM471J | |
| | R247, R248 | RD1/8PM102J | RDR1/4PM822J | |
| | R249, R250 | RDR1/4PM102J | RDR1/4PM821J | |
| | R251, R252 | RDR1/4PM152J | RDR1/4PM222J | |
| | AM RF Tuning block | AXX1011 | AXX1014 | |

● POWER assembly (AWZ3696)

The POWER assembly (AWZ3696) is the same as the POWER assembly (AWZ3697) with the exception of the following sections.

| Mark | Symbol & Description | Part No. | | Remarks |
|----------|----------------------|----------|-----------|---------|
| | | AWZ3697 | AWZ3696 | |
| Δ | L351 | ..... | ATF – 163 | |
| Δ | C353 (0.01/AC400V) | ..... | ACG1002 | |

4. ADJUSTMENTS

The F – 550RDS/HE, HB and HEWZI types are the same as the F – 676/HEWZ type with the exception of the following sections.

4.1 FM MONO

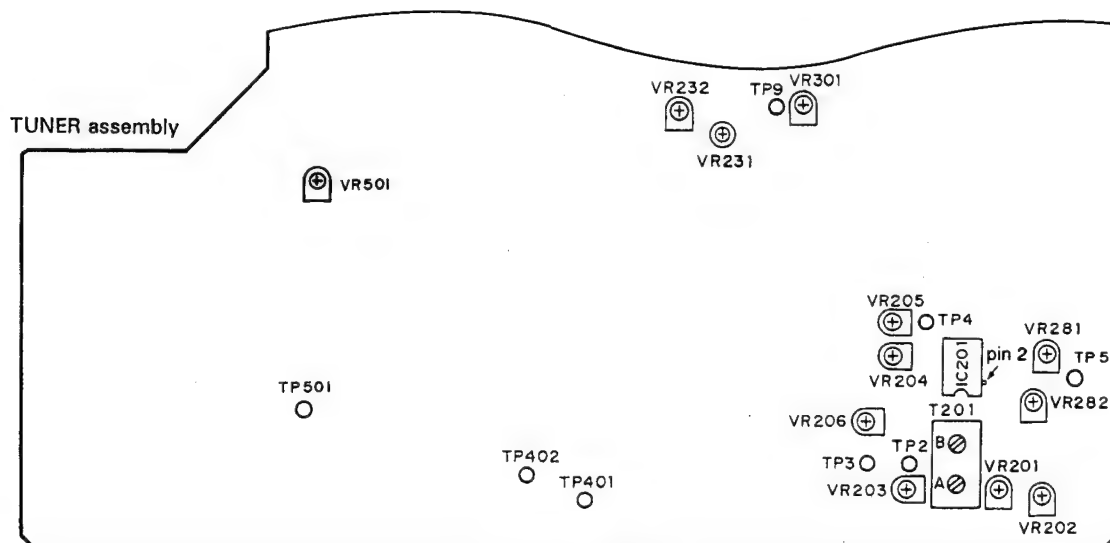
| Step | Adjustment Name | FM SG (1kHz±75kHz dev.) | | | FL display, IF BAND etc. | Location | Adjustment | Content of change |
|------|------------------------|-------------------------|------------|------------|-----------------------------|----------|---|-----------------------------|
| | | Frequency | Modulation | Level | | | | |
| 3 | Sub-balance adjustment | 98MHz | MONO | 60dB μ | 98MHz NORMAL | VR206 | Adjust so that the AC voltage at TP5 becomes minimum. | Adjustment ; IC201 → TP5 |

4.2 FM STEREO

| Step | Adjustment Name | FM SG (1kHz±75kHz dev.) | | | FL display, IF BAND etc. | Location | Adjustment | Content of change |
|------|----------------------------|-------------------------|------------|------------|---------------------------------------|----------|--|-------------------|
| | | Frequency | Modulation | Level | | | | |
| 7 | Noise reduction adjustment | 89MHz | L-ONLY | 60dB μ | 89MHz NORMAL MPX NR : ON/OFF | VR451 | Adjust so that the output level, when ON, becomes +1%dB when the MPX NR of the main unit is OFF. | Deleted. |

4.3 FM ETC

| Step | Adjustment Name | FM SG (1kHz±75kHz dev.) | | | FL display, IF BAND etc. | Location | Adjustment | Content of change |
|------|---------------------|-------------------------|---------------------|------------|-----------------------------|----------|---|-------------------|
| | | Frequency | Modulation | Level | | | | |
| 3 | SK level adjustment | 88MHz | RF SG (External) | 60dB μ | 88MHz NORMAL (ATT ON) | VR501 | Adjust so that the voltage between TP501 (57kHz) and GND becomes maximum. | Added. |



Service Manual

PIONEER®
The Art of Entertainment

PION-03020



ORDER NO.
ARP2242

FM/AM DIGITAL SYNTHESIZER TUNER

F-676

F-676-S

F-676, F-676-S AND F-51 HAVE THE FOLLOWING:

| Type | Model | | | Power Requirement | Remarks |
|-------|-------|---------|------|----------------------------------|---------|
| | F-676 | F-676-S | F-51 | | |
| HEWZ | ○ | ○ | — | AC220V-230V, 240V (switchable) * | |
| HE | ○ | — | — | AC220V-230V, 240V (switchable) * | |
| HB | ○ | — | — | AC220V-230V, 240V (switchable) * | |
| HIX1B | ○ | — | — | AC220V-230V, 240V (switchable) * | |
| KU | — | — | ○ | AC120V only | |

* Change the primary wiring of the power transformer.

- This manual is applicable to the F-676/HEWZ, HE, HB and F-676-S/HEWZ types.
- As to the F-676/HE, HB and F-676-S/HEWZ types, refer to page 33.
- As to the other types, refer to applicable service manuals.
- The F-676-S is the same as the F-676 except for color.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
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SV APR. 1991

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| 3. SCHEMATIC DIAGRAM..... | 6 | 6. AJUSTES | 30 |
| 4. P.C. BOARDS CONNECTION DIAGRAM | 15 | 7. FOR F-676/HE, HB AND F-676-S/HEWZ TYPES | 33 |
| 5. P.C.B.'s PARTS LIST | 21 | 8. SPECIFICATIONS | 35 |
| | | 9. PANEL FACILITIES..... | 36 |

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

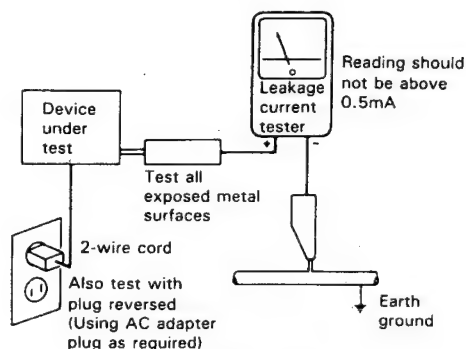
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

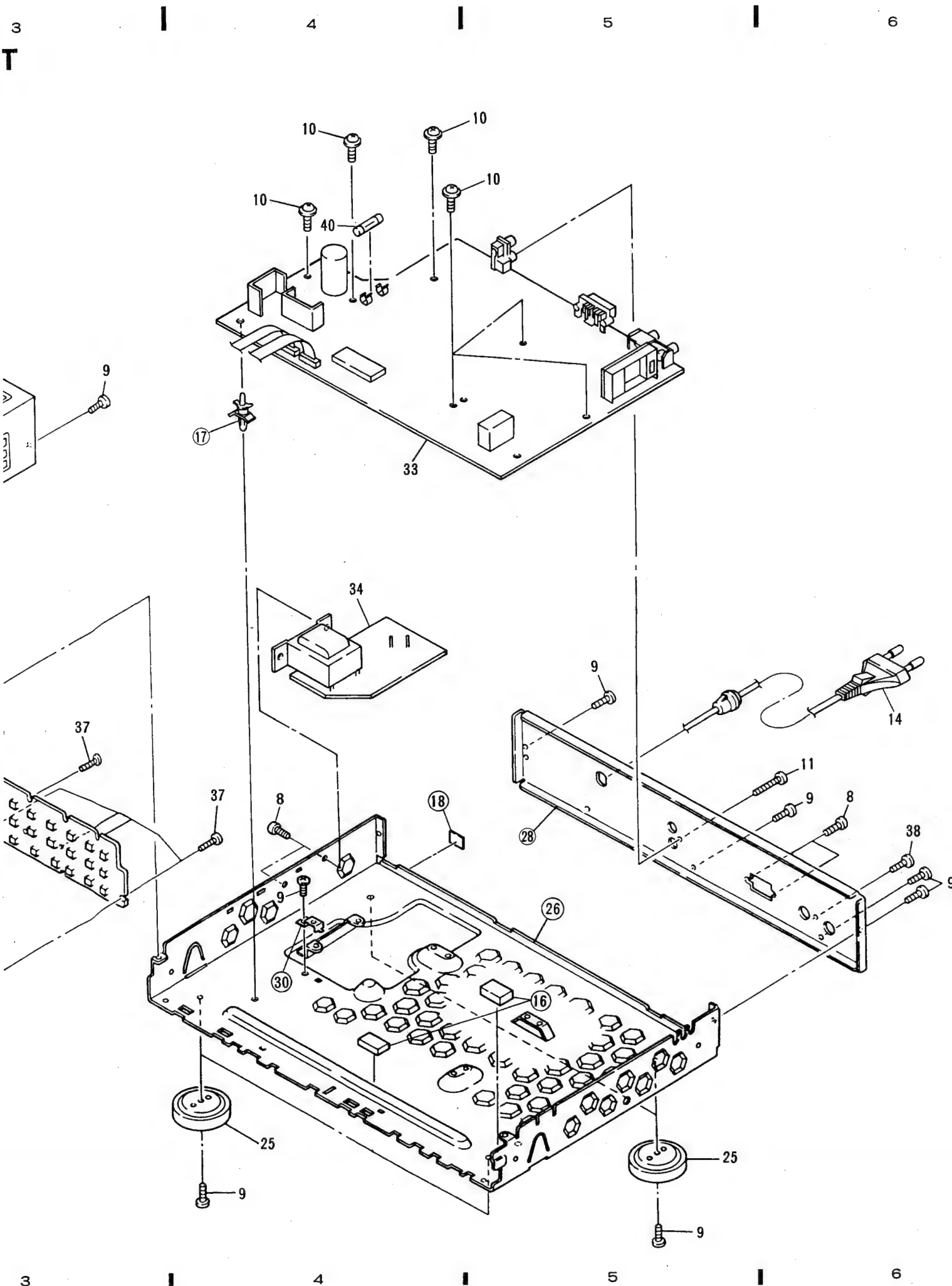
2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.



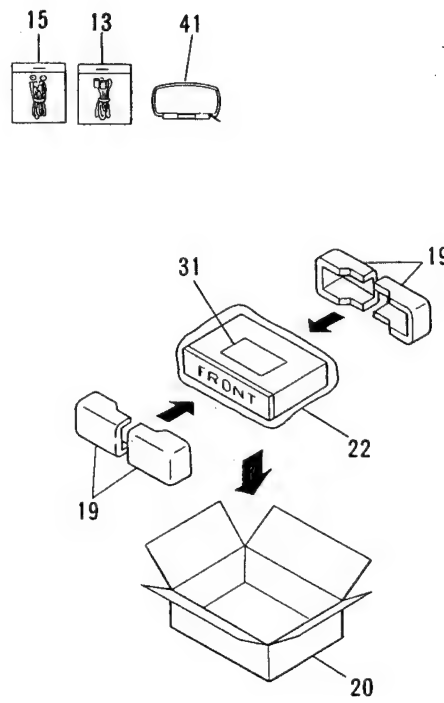
NOTES:

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

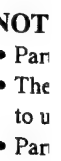
Parts List

| Mark | No. | Description | Part No. |
|----------|-----|---------------------------------|--------------|
| | 1 | LIGHT ACTION BUTTON | AAD1733 |
| | 2 | STATION BUTTON(ABS) | AAD1751 |
| | | (1/13/25 - 6/18/30) | |
| | 3 | STATION BUTTON(ABS) | AAD1752 |
| | | (7/19/31 - 12/24/36) | |
| | 4 | PANEL | AAK1685 |
| | 5 | FL FILTER | AAK1785 |
| | 6 | ..... |  |
| | 7 | NAME PLATE (METAL) | AAM1029 |
| | 8 | SCREW | ABA - 298 |
| | 9 | SCREW (STEEL) | ABA1009 |
| | 10 | SCREW (STEEL) | ABA1011 |
| | 11 | SCREW (STEEL) | ABA1047 |
| | 12 | SCREW (STEEL) | ABA1048 |
| | 13 | PLUG CORD | ADE - 044 |
| Δ | 14 | AC POWER CORD | ADG1010 |
| | 15 | FM ANTENNA | ADH1002 |
| | 16 | CUSHION (RUBBER) | |
| | 17 | ..... |  |
| | 18 | SPACER | |
| | 19 | FRONT REAR PAD | AHA1095 |
| | 20 | PACKING CASE | AHD2053 |
| | 21 | ..... |  |
| | 22 | PACKING SHEET | AHG1017 |
| | 23 | PANEL BASE | AMB1815 |
| | 24 | INDICATING LENS | AMR1160 |
| | 25 | INSULATOR ASSY | AMR2140 |
| | 26 | CHASSIS ASSY | |
| | 27 | FRONT PANEL | ANB1449 |
| | 28 | REAR PANEL | |
| | 29 | BONNET | AZN1745 |
| | 30 | PCB HOLDER | |
| | 31 | OPREATING INSTRUCTIONS (GERMAN) | ARC1263 |
| | 32 | ..... |  |
| ⊙ | 33 | TUNER ASSEMBLY | AWZ3635 |
| ⊙ | 34 | POWER ASSEMBLY | AWZ3639 |
| | 35 | DISPLAY ASSEMBLY | AWP1034 |
| | 36 | SCREW | BBT30P060FZK |
| | 37 | SCREW | BPZ26P080FMC |
| | 38 | SCREW | VMZ30P060FCU |
| | 39 | ..... |  |
| Δ | 40 | FU1 FUSE (T400MA) | AEK - 504 |
| | 41 | L1 LOOP ANTENNA | ATB1006 |

Packing



EXPLODED VIEWS



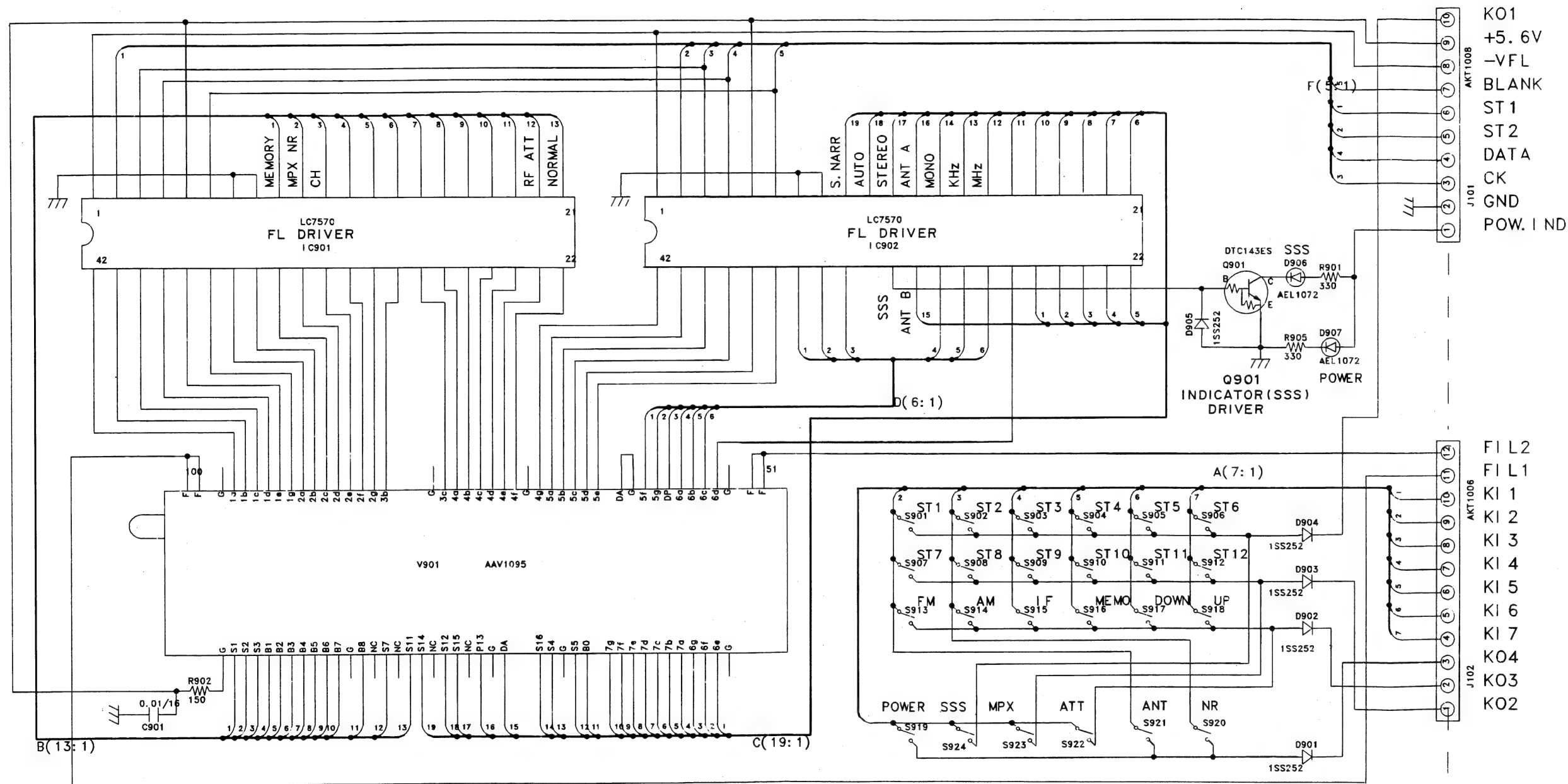
Parl

Marl

3. SCHEMATIC DIAGRAM

3.1 DISPLAY ASSEMBLY (AWP1034)

DISPLAY ASSEMBLY (AWP1034)



1. RESISTORS:
Indicated in Ω , 1
noted k; k Ω , M
(M); $\pm 20\%$ toler
2. CAPACITORS:
Indicated in capaci
Indication without
3. VOLTAGE CURRE
mA; DC curren
mV; Signal vol
• The table in th

4. OTHERS:
→; Signal route.
⊗; Adjusting poi
The Δ mark for
importance of th
replacing, be sure
* marked capaci
- This is the basic
vary due to impr

IC151
(TA7060AP)

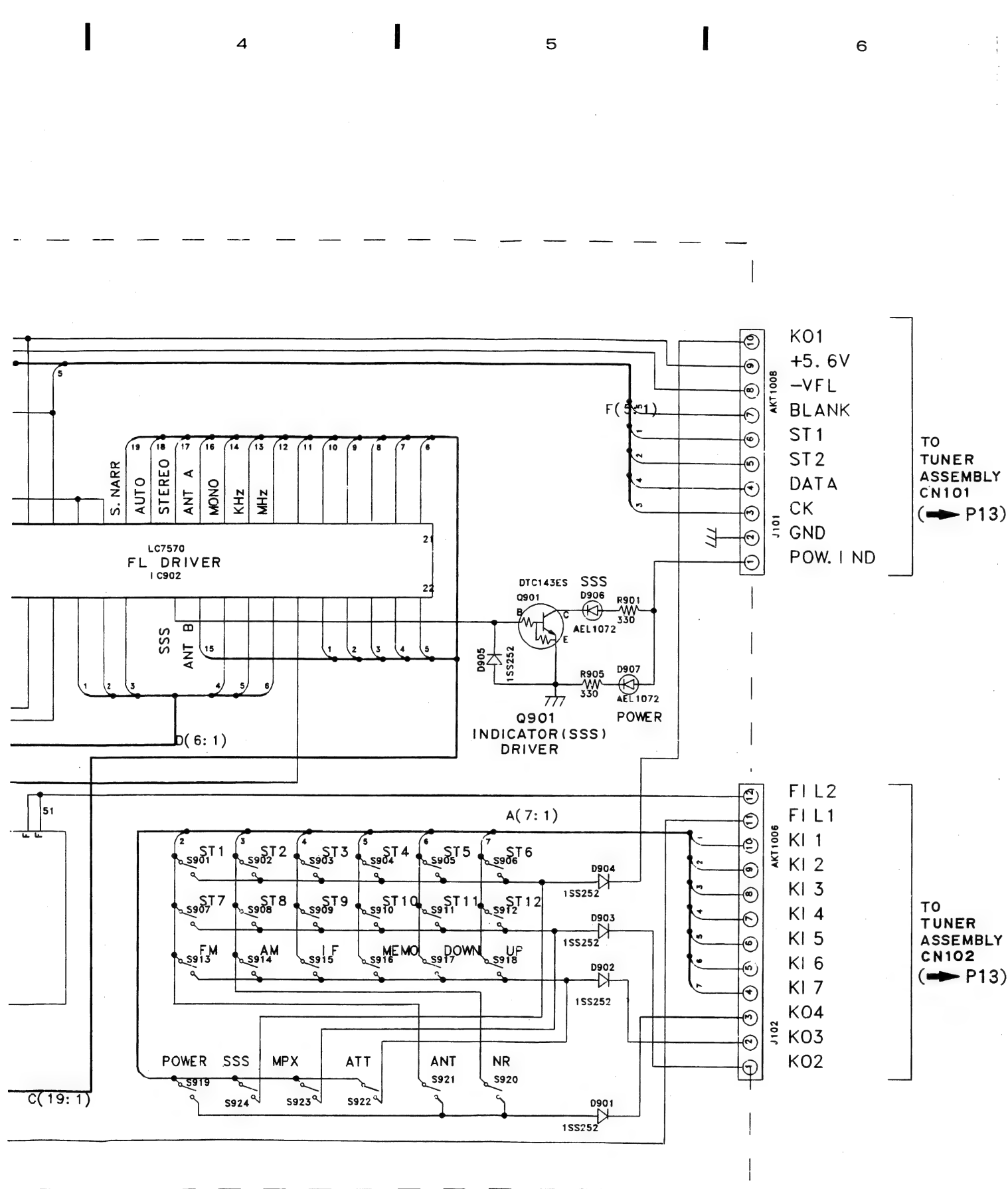
| Pin No. | Volts |
|---------|-------|
| 1 | 1.45 |
| 2 | 1.45 |
| 3 | 0 |
| 4 | 9.14 |
| 5 | 11.3 |

IC152
(TA7060AP)

| Pin No. | Volts |
|---------|-------|
| 1 | 1.47 |
| 2 | 1.47 |
| 3 | 0.0 |
| 4 | 8.96 |
| 5 | 11.3 |

IC452
(LA3607)

| Pin No. | Volts | Pin No. |
|---------|-------|---------|
| 1 | 6.16 | 11 |
| 2 | 5.65 | 12 |
| 3 | 6.2 | 13 |
| 4 | 5.66 | 14 |
| 5 | 6.2 | 15 |
| 6 | 5.66 | 16 |
| 7 | 6.2 | 17 |
| 8 | 5.65 | 18 |
| 9 | 6.2 | 19 |
| 10 | 5.66 | 20 |



KO1
+5.6V
-VFL
BLANK
ST1
ST2
DATA
CK
GND
POW. IND

TO
TUNER
ASSEMBLY
CN101
(→ P13)

FIL2
FIL1
KI1
KI2
KI3
KI4
KI5
KI6
KI7
KO4
KO3
KO2

TO
TUNER
ASSEMBLY
CN102
(→ P13)

- RESISTORS :**
Indicated in Ω , 1/4W, 1/8W, $\pm 5\%$ tolerance unless otherwise noted k; k Ω , M; M Ω , (F); $\pm 1\%$, (G); $\pm 2\%$, (K); $\pm 10\%$, (M); $\pm 20\%$ tolerance.
- CAPACITORS :**
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE CURRENT :**
mA; DC current at no input signal.
mV; Signal voltage at FM 400Hz ± 75 Hz DEV.
• The table in the margin shows the DC voltage at no signal.
- OTHERS :**
→; Signal route.
⊗; Adjusting point.
The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
* marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

- SWITCHES (Underline indicates switch position)**
DISPLAY ASSEMBLY
S901 : ST1
S902 : ST2
S903 : ST3
S904 : ST4
S905 : ST5
S906 : ST6
S907 : ST7
S908 : ST8
S909 : ST9
S910 : ST10
S911 : ST11
S912 : ST12
S913 : FM
S914 : AM
S915 : IF
S916 : MEMO
S917 : DOWN
S918 : UP
S919 : POWER
S920 : NR
S921 : ANT
S922 : ATT
S923 : MPX
S924 : SSS

IC151
(TA7060AP)

| Pin No. | Volts |
|---------|-------|
| 1 | 1.45 |
| 2 | 1.45 |
| 3 | 0 |
| 4 | 9.14 |
| 5 | 11.3 |

IC152
(TA7060AP)

| Pin No. | Volts |
|---------|-------|
| 1 | 1.47 |
| 2 | 1.47 |
| 3 | 0.0 |
| 4 | 8.96 |
| 5 | 11.3 |

IC231
(PA5007)

| Pin No. | Volts | Pin No. | Volts |
|---------|-------|---------|-------|
| 1 | 6.96 | 16 | 12.3 |
| 2 | 3.08 | 17 | 0 |
| 3 | 3.07 | 18 | 0 |
| 4 | 3.07 | 19 | 6.23 |
| 5 | 1.43 | 20 | 6.23 |
| 6 | 5.34 | 21 | 6.23 |
| 7 | 3.09 | 22 | 6.23 |
| 8 | 3.09 | 23 | 6.2 |
| 9 | 0 | 24 | 6.2 |
| 10 | 6.99 | 25 | 6.21 |
| 11 | 9.15 | 26 | 6.22 |
| 12 | 8.84 | 27 | 5.51 |
| 13 | 22.7 | 28 | 5.44 |
| 14 | 5.28 | 29 | 6.22 |
| 15 | 6.3 | 30 | 6.22 |

IC452
(LA3607)

| Pin No. | Volts | Pin No. | Volts |
|---------|-------|---------|-------|
| 1 | 6.16 | 11 | 6.11 |
| 2 | 5.65 | 12 | 5.64 |
| 3 | 6.2 | 13 | 5.11 |
| 4 | 5.66 | 14 | 5.64 |
| 5 | 6.2 | 15 | 6.42 |
| 6 | 5.66 | 16 | 5.64 |
| 7 | 6.2 | 17 | 6.64 |
| 8 | 5.65 | 18 | 12.3 |
| 9 | 6.2 | 19 | 6.6 |
| 10 | 5.66 | 20 | 0 |

IC453
(NJM4558S)

| Pin No. | Volts |
|---------|-------|
| 1 | 12.3 |
| 2 | 6.22 |
| 3 | 6.16 |
| 4 | 6.21 |
| 5 | 0 |
| 6 | 6.2 |
| 7 | 6.17 |
| 8 | 6.23 |
| 9 | 12.3 |

IC454, IC455, IC456
(NJM4558S)

| Pin No. | Volts |
|---------|-------|
| 1 | 12.3 |
| 2 | 6.22 |
| 3 | 6.15 |
| 4 | 6.23 |
| 5 | 0 |
| 6 | 6.23 |
| 7 | 6.17 |
| 8 | 6.23 |
| 9 | 12.3 |

IC301
(LA1265S)

| Pin No. | Volts | Pin No. | Volts |
|---------|-------|---------|-------|
| 1 | 2.31 | 12 | 1.47 |
| 2 | 2.31 | 13 | 0.6 |
| 3 | 2.31 | 14 | 0.9 |
| 4 | 0 | 15 | 2.31 |
| 5 | 12.3 | 16 | 1.4 |
| 6 | 12.3 | 17 | 0 |
| 7 | 12.3 | 18 | 0 |
| 8 | 12.4 | 19 | 0 |
| 9 | 12.2 | 20 | 0.6 |
| 10 | 2.28 | 21 | 3.87 |
| 11 | 1.54 | 22 | 2.7 |

IC451
(PA0042)

| Pin No. | Volts | Pin No. | Volts |
|---------|-------|---------|-------|
| 1 | 12.3 | 16 | 6.34 |
| 2 | 6.13 | 17 | 6.32 |
| 3 | 6.13 | 18 | 6.35 |
| 4 | 6.33 | 19 | 6.31 |
| 5 | 6.33 | 20 | 6.35 |
| 6 | 6.33 | 21 | 6.31 |
| 7 | 6.32 | 22 | 6.34 |
| 8 | 6.35 | 23 | 0 |
| 9 | 6.32 | 24 | 0 |
| 10 | 6.35 | 25 | 0 |
| 11 | 6.32 | 26 | 6.34 |
| 12 | 6.34 | 27 | 6.34 |
| 13 | 6.32 | 28 | 6.35 |
| 14 | 6.35 | 29 | 6.34 |
| 15 | 6.32 | 30 | 0 |

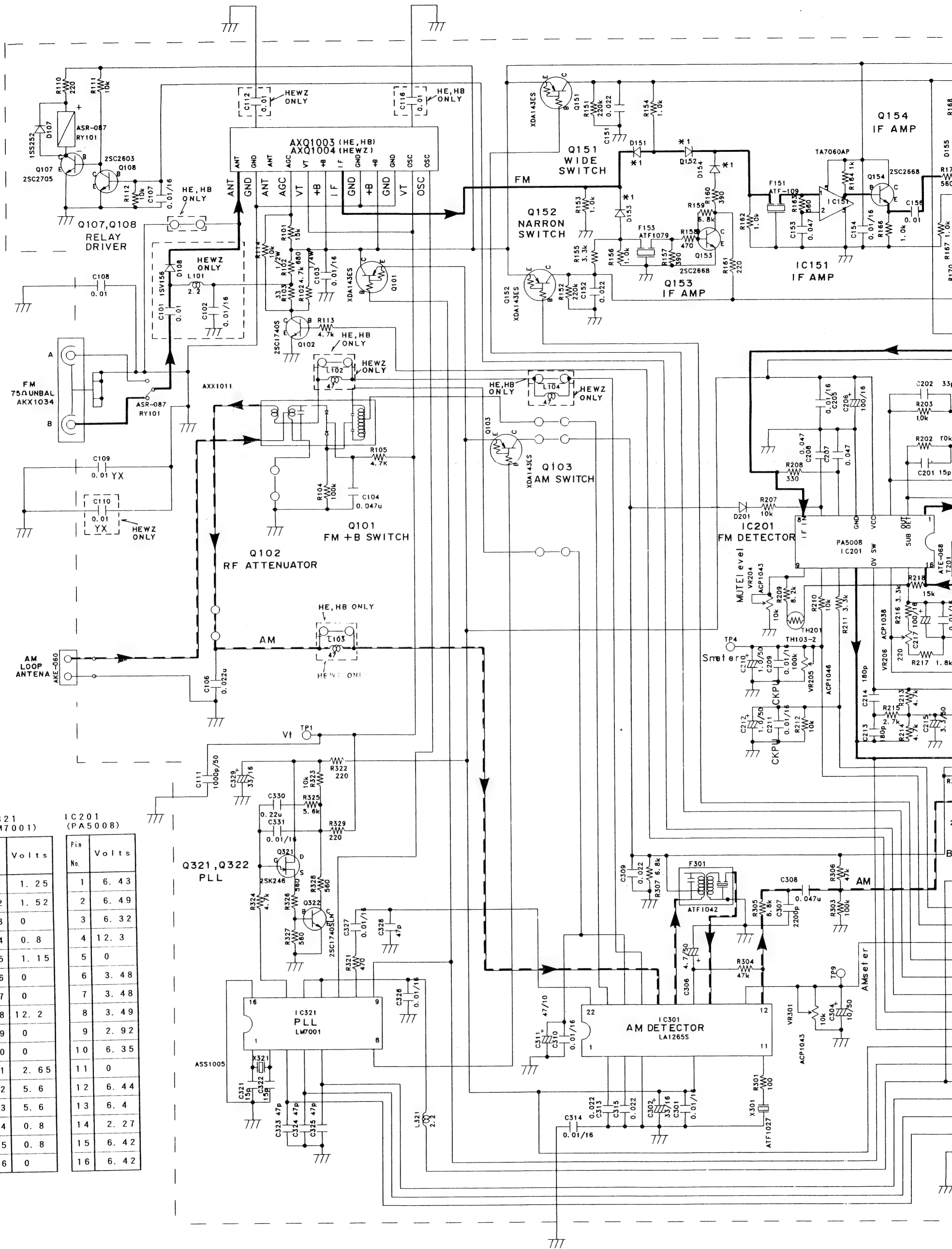
A

B

C

D

3.2 TUNER ASSEMBLY (1/2) (AWZ3635)



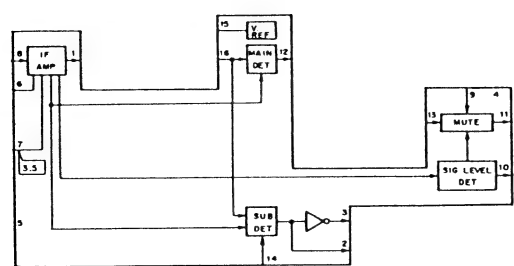
IC321 (LM7001)

| Pin No. | Volts |
|---------|-------|
| 1 | 1.25 |
| 2 | 1.52 |
| 3 | 0 |
| 4 | 0.8 |
| 5 | 1.15 |
| 6 | 0 |
| 7 | 0 |
| 8 | 12.2 |
| 9 | 0 |
| 10 | 0 |
| 11 | 2.65 |
| 12 | 5.6 |
| 13 | 5.6 |
| 14 | 0.8 |
| 15 | 0.8 |
| 16 | 0 |

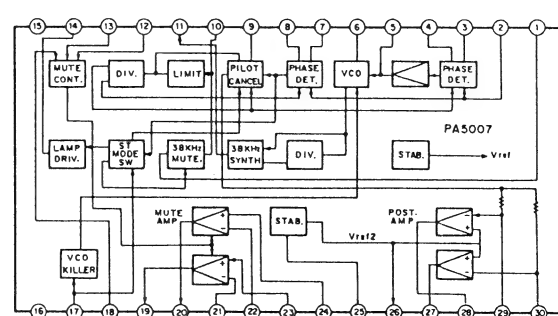
IC201 (PA5008)

| Pin No. | Volts |
|---------|-------|
| 1 | 6.43 |
| 2 | 6.49 |
| 3 | 6.32 |
| 4 | 12.3 |
| 5 | 0 |
| 6 | 3.48 |
| 7 | 3.48 |
| 8 | 3.49 |
| 9 | 2.92 |
| 10 | 6.35 |
| 11 | 0 |
| 12 | 6.44 |
| 13 | 6.4 |
| 14 | 2.27 |
| 15 | 6.42 |
| 16 | 6.42 |

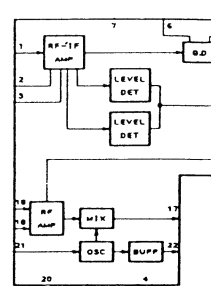
IC201 (PA5008)

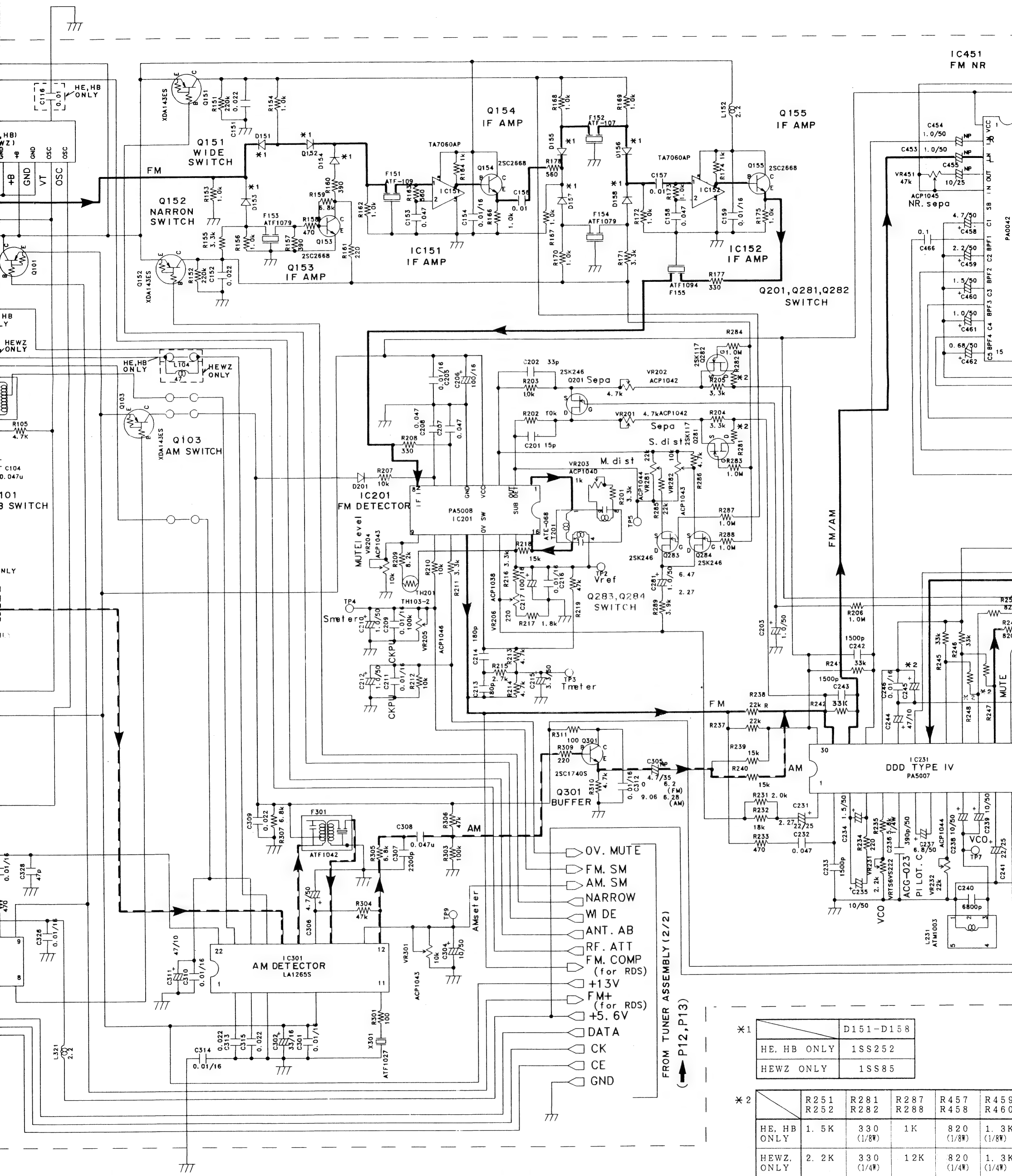
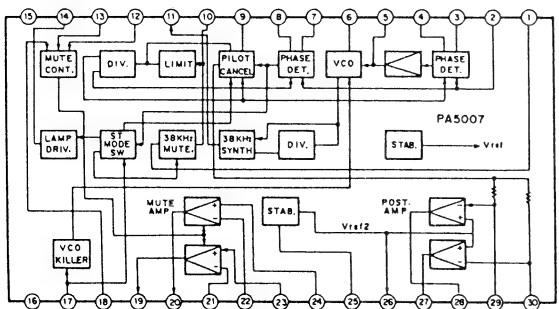


IC231 (PA5007)

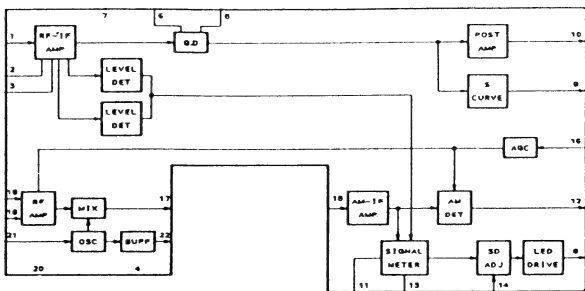


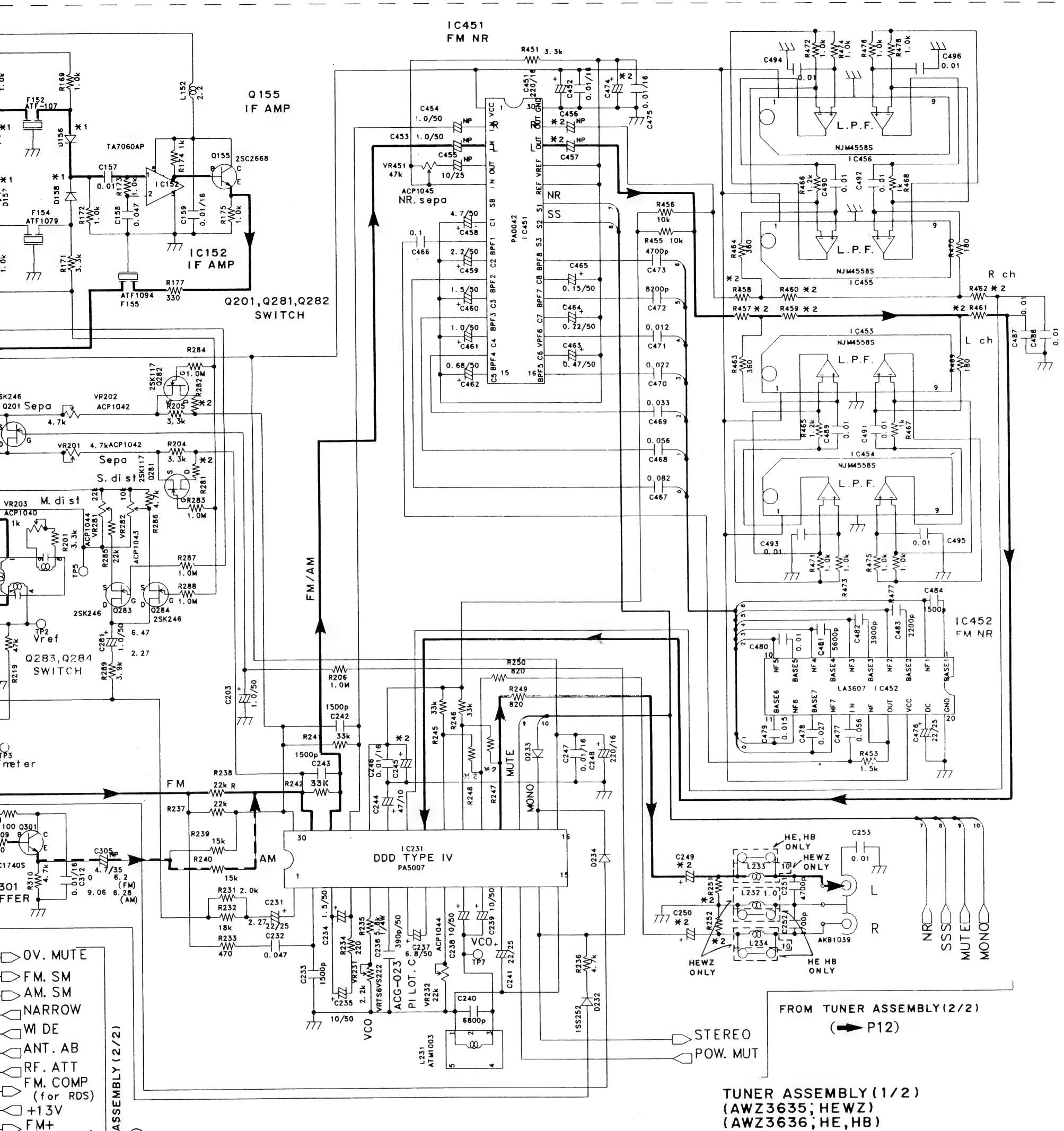
IC301 (LA1265S)



**IC231 (PA5007)**

IC301 (LA1265S)





- 0V. MUTE
- FM. SM
- AM. SM
- NARROW
- WIDE
- ANT. AB
- RF. ATT
- FM. COMP (for RDS)
- +13V
- FM+ (for RDS)
- +5.6V
- DATA
- CK
- CE
- GND

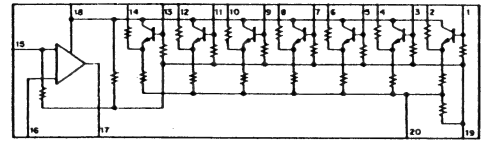
*1

| | |
|-------------|-----------|
| | D151-D158 |
| HE, HB ONLY | 1SS252 |
| HEWZ ONLY | 1SS85 |

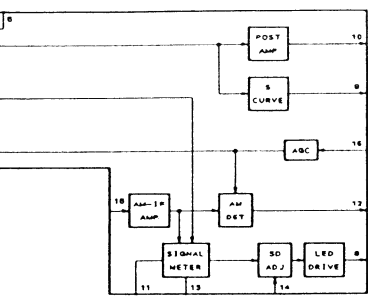
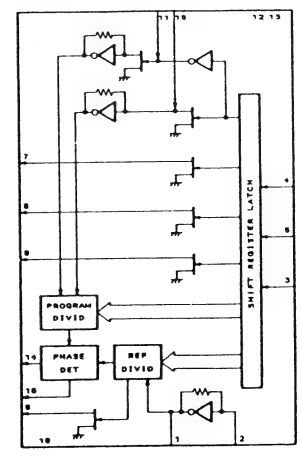
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| | | | | | | | | | |
|-------------|--------------|---------------|--------------|---------------|----------------|---------------|--------------|--------------|--------------|
| | R251 R252 | R281 R282 | R287 R288 | R457 R458 | R459 R460 | R461 R462 | C245 C474 | C249 C250 | C456 C457 |
| HE, HB ONLY | 1.5K | 330 (1/8W) | 1K | 820 (1/8W) | 1.3K (1/8W) | 360 (1/8W) | 1000 /10 | 4.7 /50 | 4.7 /35 |
| HEWZ ONLY | 2.2K | 330 (1/4W) | 12K | 820 (1/4W) | 1.3K (1/4W) | 360 (1/4W) | 1000 /16 | 4.7 /25 | 4.7 /25 |

IC452 (LA3607)



IC321 (LM7001)



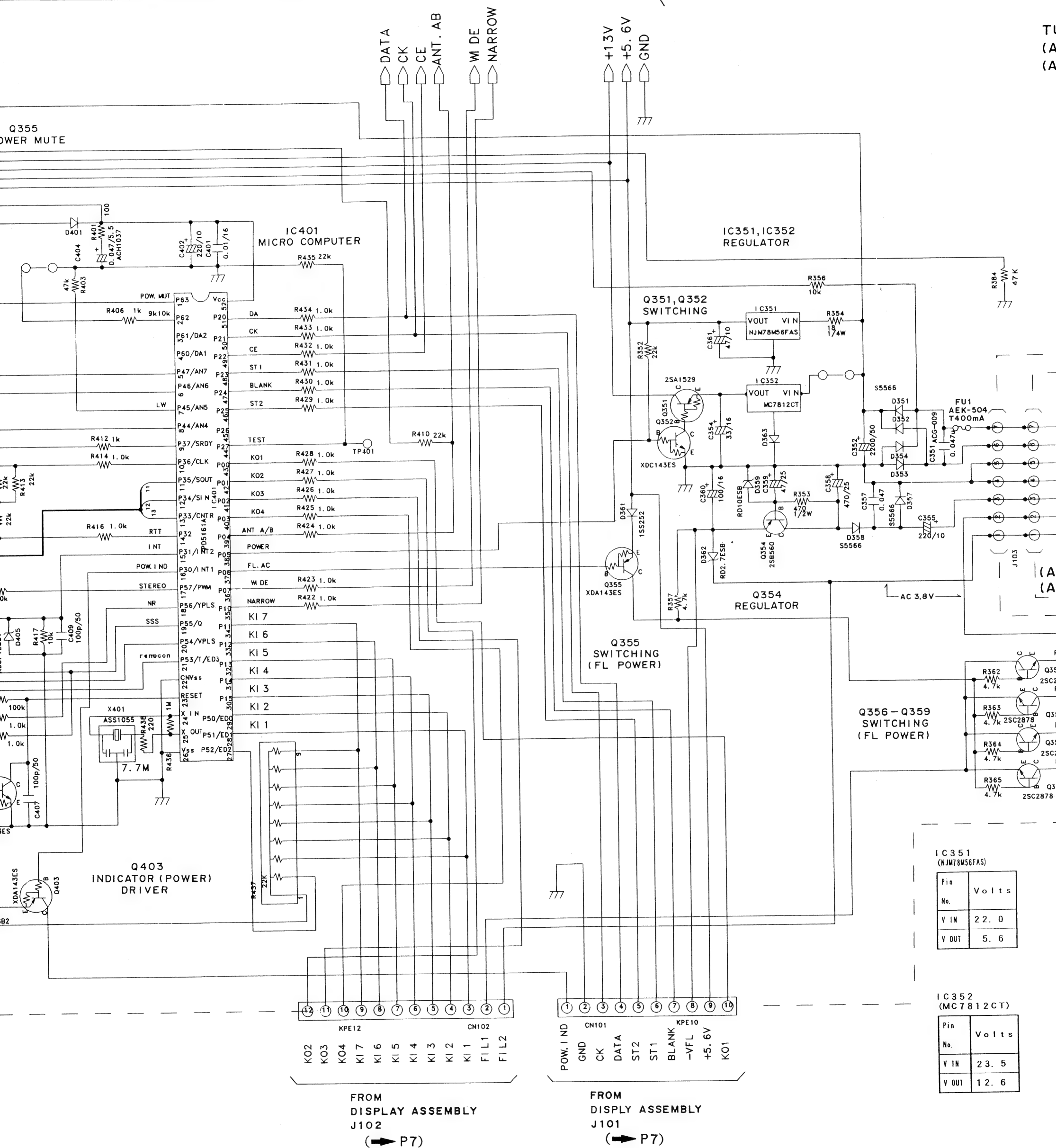
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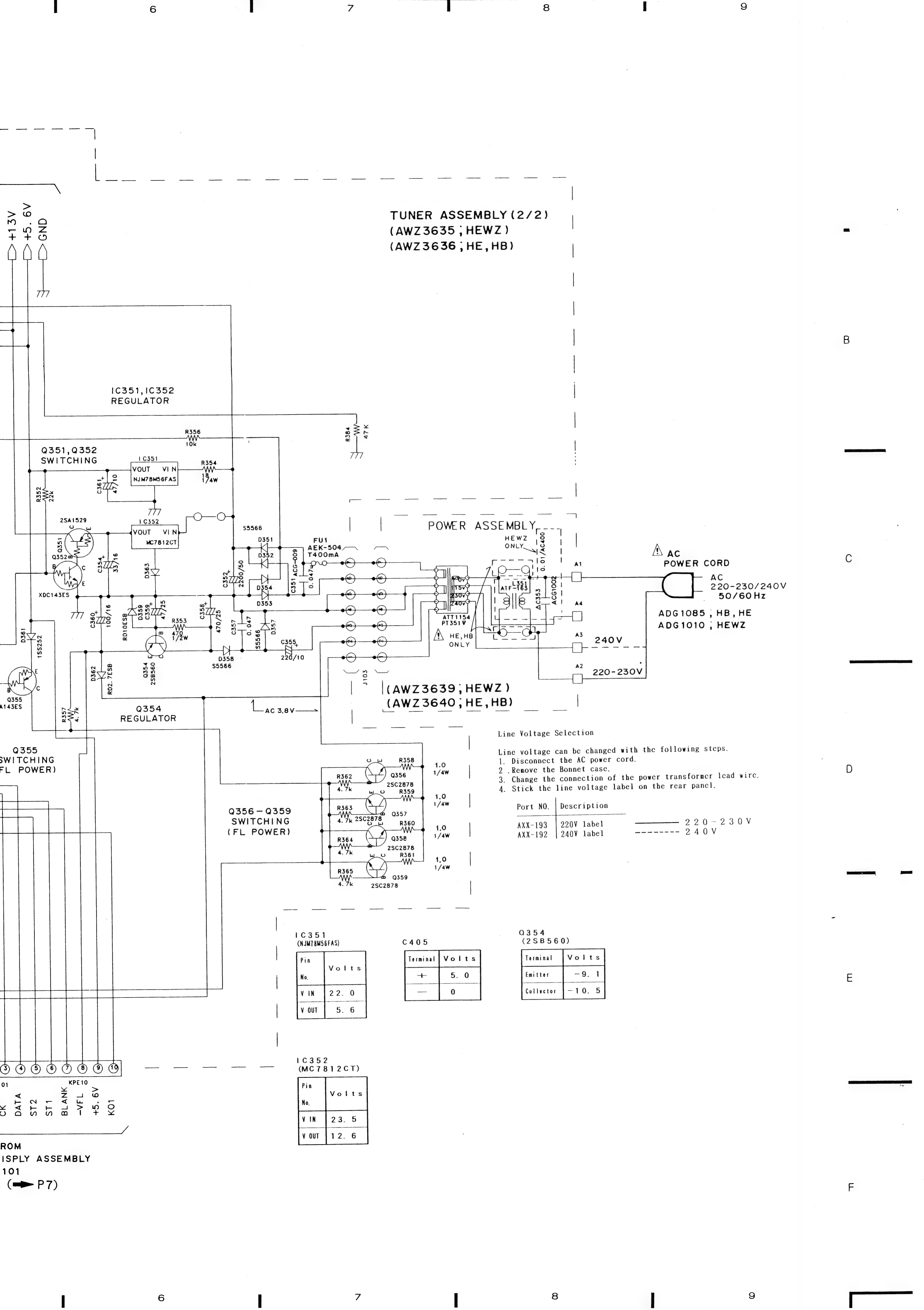
BLY (AWZ3639)

TO TUNER ASSEMBLY (1/2) (➡ P10)



| | |
|---------|-------|
| Pin No. | Volts |
| V IN | 22.0 |
| V OUT | 5.6 |

| | |
|---------|-------|
| Pin No. | Volts |
| V IN | 23.5 |
| V OUT | 12.6 |



4. P.C. BOARDS CONNECTION DIAGRAM

NOTE

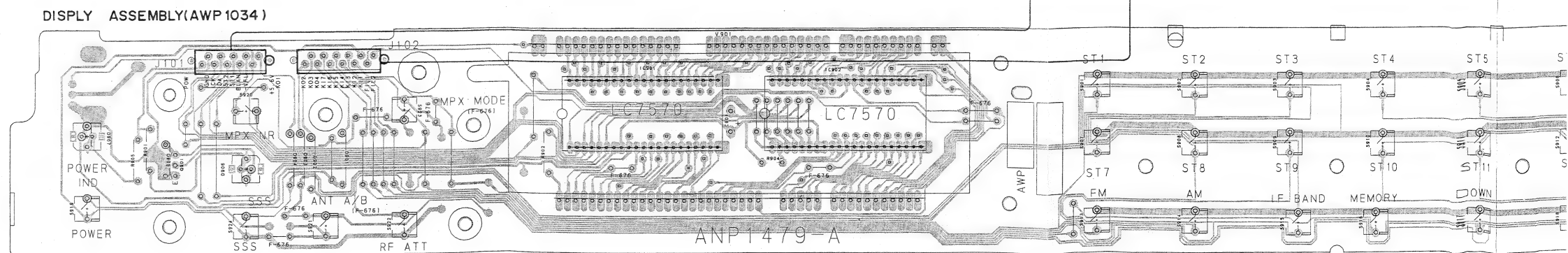
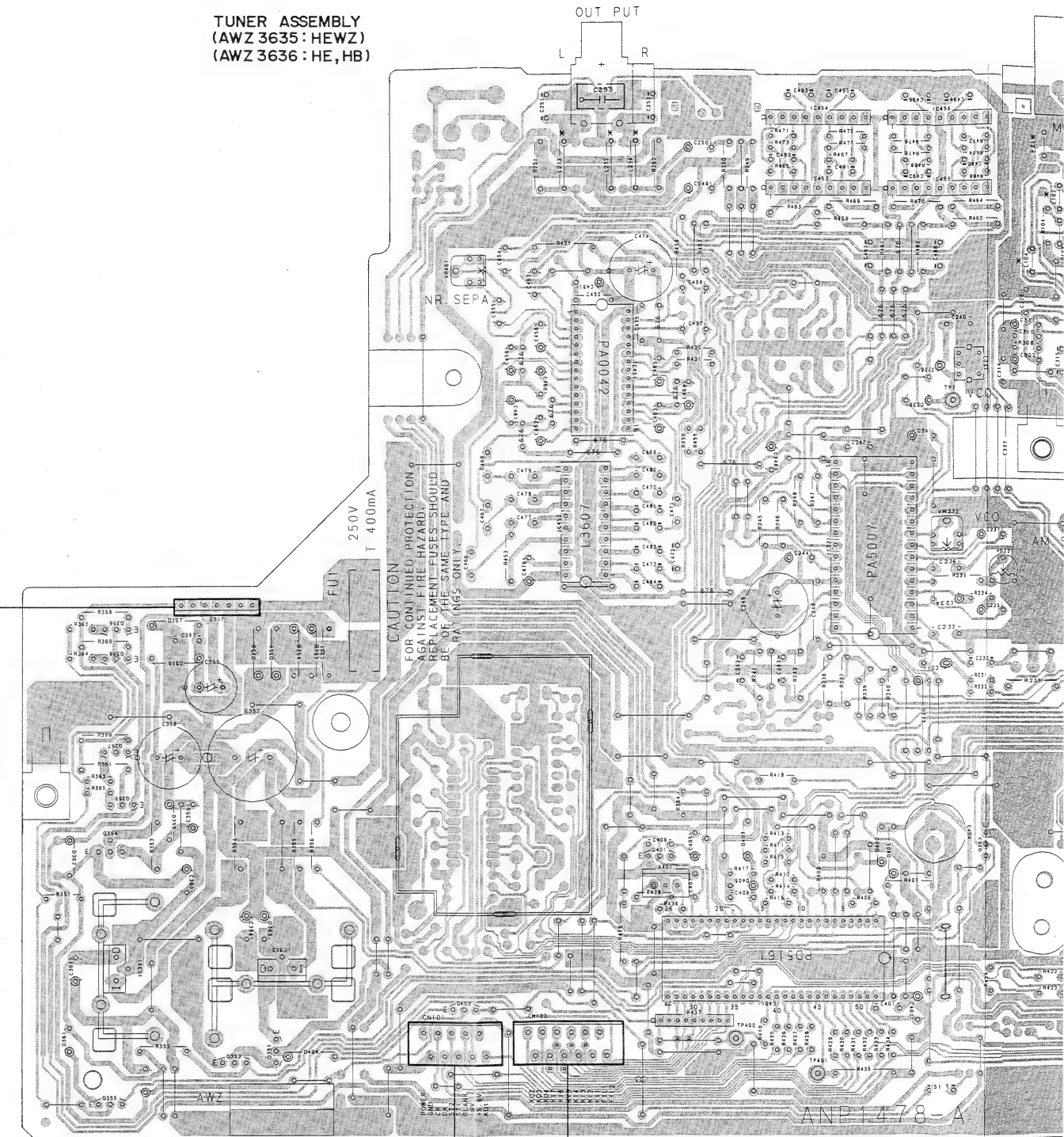
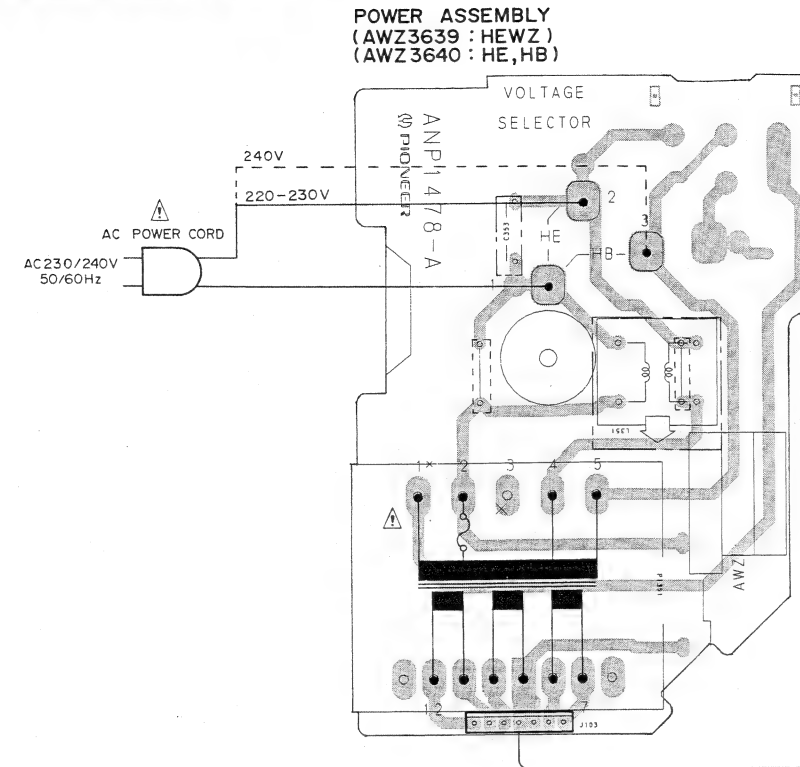
1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|-----------------------------------|---------------------------|--------------------------|
| | | Transistor |
| | | Radiator type transistor |
| | | Diode |
| | | Resistor |
| | | Capacitor (Polarity) |
| | | Capacitor (Non-polarity) |

Others

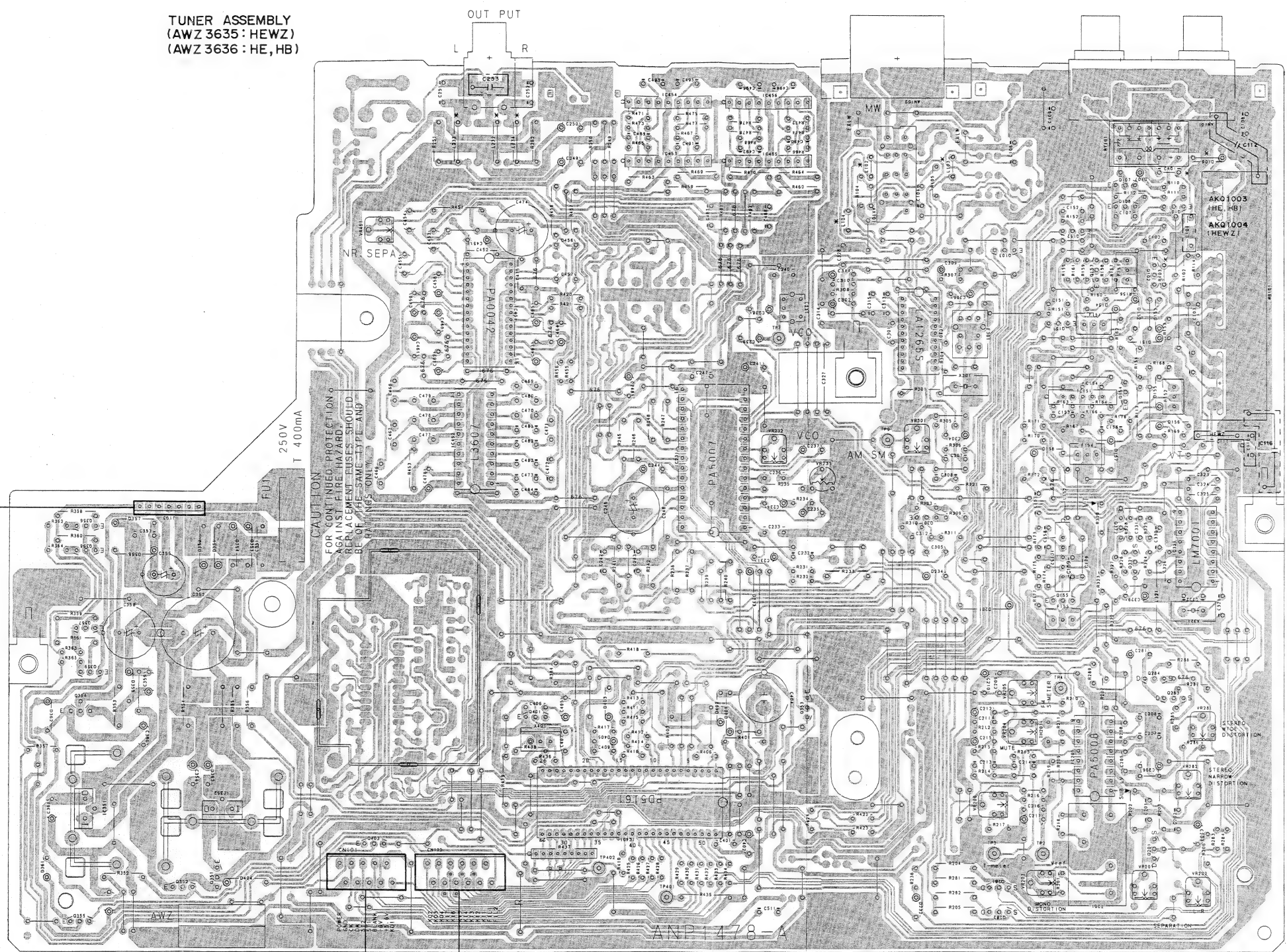
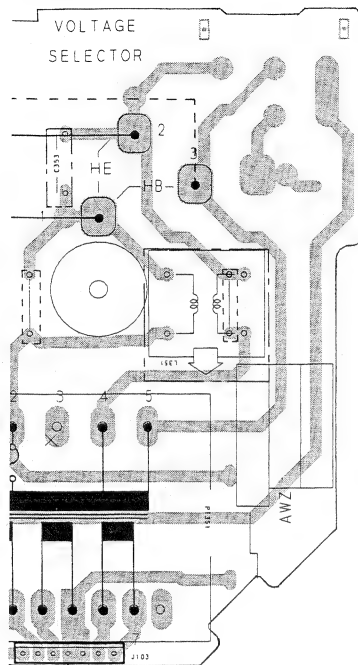
| P.C.B. pattern diagram indication | Part Name |
|-----------------------------------|--|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Fitter |
| VR | Variable resistor or Semi-fixed resistor |

3. The capacitor terminal marked with @ (double circles) shows negative terminal.
4. The diode terminal marked with @ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

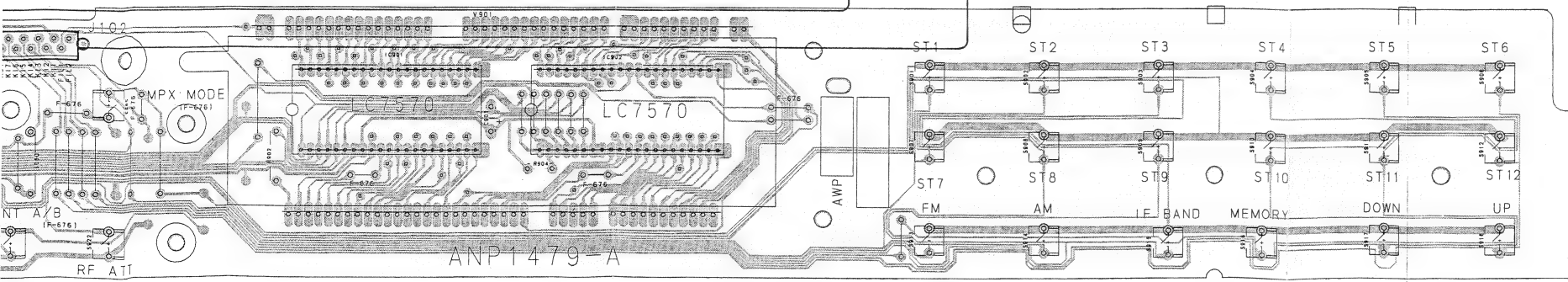


ASSEMBLY
(HEWZ)
(HE,HB)

TUNER ASSEMBLY
(AWZ 3635 : HEWZ)
(AWZ 3636 : HE, HB)



| | | | | |
|---|-------|-------|------|------|
| A | IC454 | IC456 | | |
| | IC453 | IC455 | Q107 | |
| | | | Q108 | Q101 |
| | | | Q152 | |
| | | | Q103 | |
| | | | Q153 | |
| | IC451 | | Q151 | |
| | IC301 | | | |
| | | | Q154 | |
| | | | | |
| B | VR451 | | | |
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| C | VR301 | | | |
| | VR232 | IC452 | | |
| | VR231 | IC231 | | |
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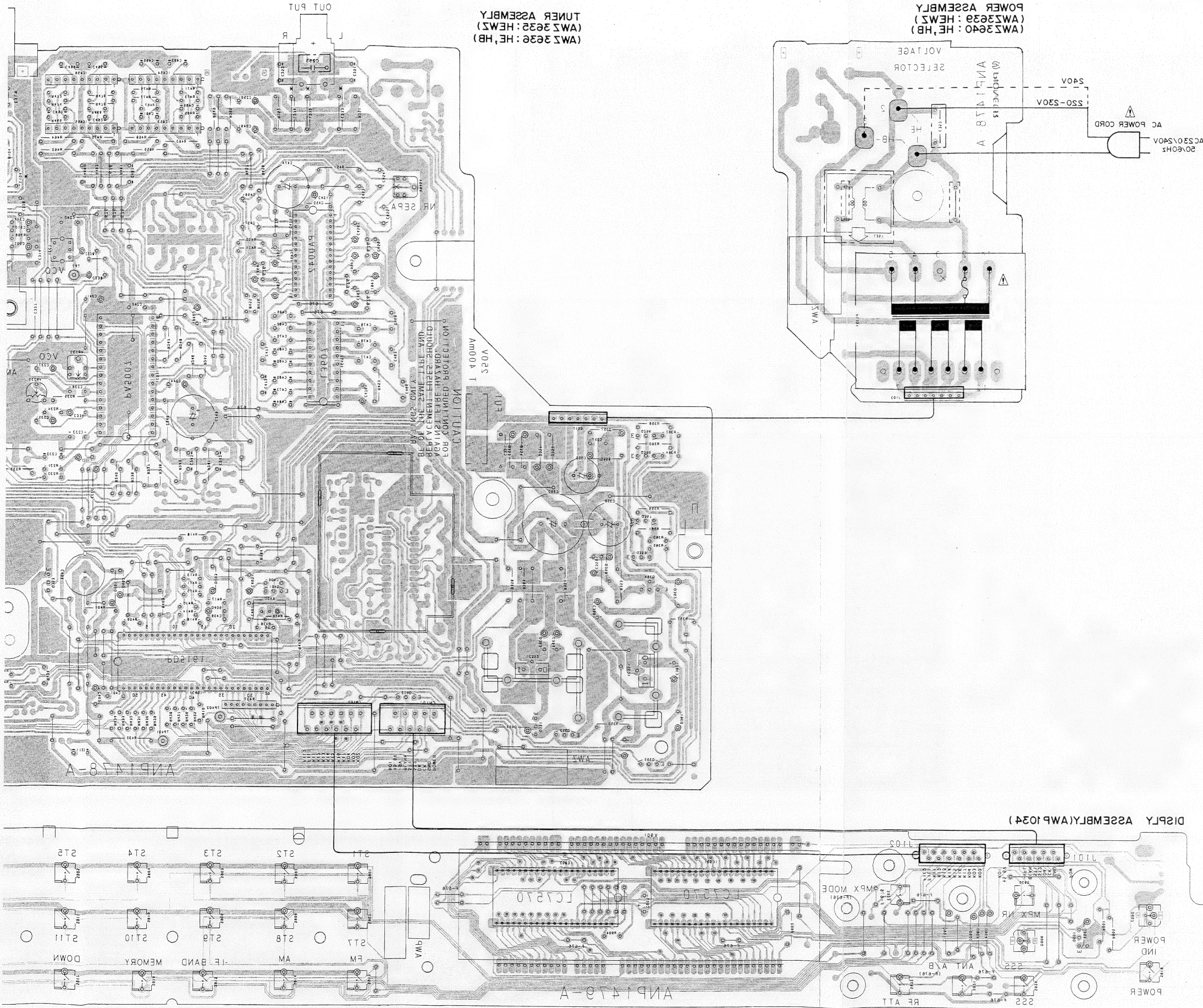
NOTE

| | | | | | | |
|--|--------------|--|--|--|--|--|
| | : HEWZ ONLY | | | | | |
| | : HE,HB ONLY | | | | | |

| | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|
| * / | L102 | L232 | D101 | D108 | C101 | R103 |
| | L103 | L233 | D103 | | | |
| | L104 | L234 | D105 | | | |
| HE, HB ONLY | JUMPER | JUMPER | UESD | JUMPER | JUMPER | JUMPER |
| HEWZ ONLY | USED | USED | JUMPER | USED | USED | USED |

4. P.C. BOARDS CONNECTION DIAGRAM

• View from soldering side



A

B

C

D

5. P.C.B's PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%)

560 Ω \rightarrow $56 \times 10^1 \rightarrow$ 561 RD1/4PS $\begin{array}{|c|c|c|} \hline 5 & 6 & 1 \\ \hline \end{array}$ J

47k Ω \rightarrow $47 \times 10^3 \rightarrow$ 473 RD1/4PS $\begin{array}{|c|c|c|} \hline 4 & 7 & 3 \\ \hline \end{array}$ J

0.5 Ω \rightarrow 0R5 RN2H $\begin{array}{|c|c|c|} \hline 0 & R & 5 \\ \hline \end{array}$ K

1 Ω \rightarrow 010 RS1P $\begin{array}{|c|c|c|} \hline 0 & 1 & 0 \\ \hline \end{array}$ K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k $\Omega \rightarrow$ $562 \times 10^1 \rightarrow$ 5621 RN1/4SR $\begin{array}{|c|c|c|c|} \hline 5 & 6 & 2 & 1 \\ \hline \end{array}$ F

| Mark | No. | Description | Part No. | Mark | No. | Description | Part No. |
|----------------------------------|------------|--------------|-------------|---------------------------|-----------|-------------------|-------------|
| ⊙ TUNER ASSEMBLY(AWZ3635) | | | | | | | |
| SEMICONDUCTORS | | | | | | | |
| | IC151, 152 | AMPLIFIER IC | TA7060AP | | D232-234 | DIODE | 1SS252 |
| | IC201 | FM IC | PA5008 | Δ | D351-354 | DIODE | S5566 |
| | IC231 | MPX IC | PA5007 | Δ | D357, 358 | DIODE | S5566 |
| | IC301 | AM/FM IC | LA1265S | | D359 | ZENER DIODE | RD10ESB |
| | IC321 | PLL IC | LM7001 | | D361 | DIODE | 1SS252 |
| | IC351 | REGULATOR IC | NJM78M56FAS | | D362 | ZENER DIODE | RD2.7ESB |
| | IC352 | REGULATOR IC | MC7812CT | | D363 | DIODE | 1SS252 |
| | IC401 | | PD5161A | | D401-403 | DIODE | 1SS252 |
| | IC451 | FM-NR | PA0042 | | D404 | ZENER DIODE | RD6.2ESB2 |
| | IC452 | GBQ IC | LA3607 | | D405 | ZENER DIODE | RD5.1ESB1 |
| | IC453-456 | OP-AMP IC | NJM4558S-X | | TH201 | THERMISTOR | TH103-2 |
| | Q101 | TRANSISTOR | XDA143ES | RELAYS | | | |
| | Q102 | TRANSISTOR | 2SC1740S | | RY101 | RELAY | ASR-087 |
| | Q103 | TRANSISTOR | XDA143ES | COILS/TRANSFORMERS | | | |
| | Q107 | TRANSISTOR | 2SC2705 | | L101 | AXIAL INDUCTOR | LAU2F2M |
| | Q108 | TRANSISTOR | 2SC2603 | | L102-104 | AXIAL INDUCTOR | LAU47DK |
| | Q151, 152 | TRANSISTOR | XDA143ES | | L152 | AXIAL INDUCTOR | LAU2F2M |
| | Q153-155 | TRANSISTOR | 2SC2668 | | L231 | COIL | ATM10J3 |
| | Q201 | N-FET | 2SK246 | | L232 | AXIAL INDUCTOR | LAU0JDM |
| | Q281, 282 | N-FET | 2SK117 | | L233, 234 | AXIAL INDUCTOR | LAU10JK |
| | Q283, 284 | N-FET | 2SK246 | | L321 | AXIAL INDUCTOR | LAU2F2M |
| | Q301 | TRANSISTOR | 2SC1740S | | T201 | IF TRANSFORMER | ATE-088 |
| | Q321 | N-FET | 2SK246 | | F151 | CERAMIC FILTER | ATF-109 |
| | Q322 | TRANSISTOR | 2SC1740SLN | | F152 | CERAMIC FILTER | ATF-107 |
| | Q351 | TRANSISTOR | 2SA1529 | | F153, 154 | CERAMIC FILTER | ATF1079 |
| | Q352, 353 | TRANSISTOR | XDC143ES | | F155 | CERAMIC FILTER | ATF1044 |
| | Q354 | TRANSISTOR | 2SB560 | | F301 | CERAMIC FILTER | ATF1042 |
| | Q355 | TRANSISTOR | XDA143ES | CAPACITORS | | | |
| | Q356-359 | TRANSISTOR | 2SC2878 | | C101 | CERAMIC CAPACITOR | CKDYX03M25 |
| | Q401 | TRANSISTOR | XDC143ES | | C102, 103 | CERAMIC CAPACITOR | CKPUY103M16 |
| | Q403 | TRANSISTOR | XDA143ES | | C104 | CERAMIC CAPACITOR | CKDYF73Z50 |
| | D107 | DIODE | 1SS252 | | C106 | CERAMIC CAPACITOR | CKDYF23Z50 |
| | D108 | DIODE | 1SV156 | | C107 | CERAMIC CAPACITOR | CKPUY103M16 |
| | D151-158 | DIODE | 1SS85 | | C108-110 | CERAMIC CAPACITOR | CKDYX03M25 |
| | D201 | DIODE | 1SS252 | | C111 | CERAMIC CAPACITOR | CKPUY102K50 |
| | | | | | C112 | CERAMIC CAPACITOR | CKDYX03M25 |
| | | | | | C151, 152 | CERAMIC CAPACITOR | CKDYF23Z50 |

| Mark | No. | Description | Part No. |
|------|-----------|-----------------------|--------------|
| | C153 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C154 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C156, 157 | CERAMIC CAPACITOR | CKDYX103M25 |
| | C158 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C159 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C201 | CERAMIC CAPACITOR | CCMCH150J50 |
| | C202 | CERAMIC CAPACITOR | CCMCH330J50 |
| | C203 | ELECTR. CAPACITOR | CEAS010M50 |
| | C205 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C206 | ELECTR. CAPACITOR | CEEA101M16 |
| | C207, 208 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C209 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C210 | ELECTR. CAPACITOR | CEAS010M50 |
| | C211 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C212 | ELECTR. CAPACITOR | CEAS010M50 |
| | C213, 214 | CERAMIC CAPACITOR | CKMYB181K50 |
| | C215 | ELECTR. CAPACITOR | CEAS3R3M50 |
| | C216 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C217 | ELECTR. CAPACITOR | CEEA101M16 |
| | C231 | ELECTR. CAPACITOR | CEAS220M25 |
| | C232 | AUDIO FILM CAPACITOR | CFTXA473J50 |
| | C233 | CERAMIC CAPACITOR | CKDYB152K50 |
| | C234 | ELECTR. CAPACITOR | CEAS1R5M50 |
| | C235 | ELECTR. CAPACITOR | CEAS100M50 |
| | C236 | CKA (390P/50V) | ACG-023 |
| | C237 | ELECTR. CAPACITOR | CEAS6R8M50 |
| | C238, 239 | ELECTR. CAPACITOR | CEAS100M50 |
| | C240 | PL. STYRENE CAPACITOR | CQSA682J50 |
| | C241 | ELECTR. CAPACITOR | CEAS220M25 |
| | C242, 243 | MYLOR FILM CAPACITOR | CQMA152J50 |
| | C244 | ELECTR. CAPACITOR | CEAS470M10 |
| | C245 | ELECTR. CAPACITOR | CEEA102M16 |
| | C246, 247 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C248 | ELECTR. CAPACITOR | CEEA221M16 |
| | C249, 250 | ELECTR. CAPACITOR | CEEA4R7M25 |
| | C251, 252 | CERAMIC CAPACITOR | CKDYB472K50 |
| | C253 | CERAMIC CAPACITOR | CKDYX103M25 |
| | C281 | ELECTR. CAPACITOR | CEAS010M50 |
| | C301 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C302 | ELECTR. CAPACITOR | CEAS330M16 |
| | C304 | ELECTR. CAPACITOR | CEAS100M50 |
| | C305 | ELECTR. CAPACITOR | CEANP4R7M35 |
| | C306 | ELECTR. CAPACITOR | CEAS4R7M50 |
| | C307 | CERAMIC CAPACITOR | CKDYB222K50 |
| | C308 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C309 | CERAMIC CAPACITOR | CKDYF223Z50 |
| | C310 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C311 | ELECTR. CAPACITOR | CEAS470M10 |
| | C312 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C313 | CERAMIC CAPACITOR | CKDYF223Z50 |
| | C314 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C315 | CERAMIC CAPACITOR | CKDYF223Z50 |
| | C321, 322 | CERAMIC CAPACITOR | CCMCH150J50 |
| | C323-325 | AXIAL CERAMIC C. | CCPUSL470J50 |

| Mark | No. | Description | Part No. |
|------|-----------|----------------------|--------------|
| | C326, 327 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C328 | AXIAL CERAMIC C. | CCPUSL470J50 |
| | C329 | ELECTR. CAPACITOR | CEAS330M16 |
| | C330 | AUDIO FILM CAPACITOR | CFTXA224J50 |
| | C331 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C351 | CAPACITOR (CERAMIC) | ACG-009 |
| | C352 | ELECTR. CAPACITOR | CEAS222M50 |
| | C354 | ELECTR. CAPACITOR | CEAS330M16 |
| | C355 | ELECTR. CAPACITOR | CEAS221M10 |
| | C357 | CERAMIC CAPACITOR | CKDYF473Z50 |
| | C358 | ELECTR. CAPACITOR | CEAS471M25 |
| | C359 | ELECTR. CAPACITOR | CEAS470M25 |
| | C360 | ELECTR. CAPACITOR | CEAS101M16 |
| | C361 | ELECTR. CAPACITOR | CEAS470M10 |
| | C401 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C402 | ELECTR. CAPACITOR | CEAS221M10 |
| | C404 | CEA (47000/5. 5V) | ACH1037 |
| | C405 | ELECTR. CAPACITOR | CEAS100M50 |
| | C406, 407 | CERAMIC CAPACITOR | CKPUYB101K50 |
| | C409 | CERAMIC CAPACITOR | CKPUYB101K50 |
| | C451 | ELECTR. CAPACITOR | CEEA221M16 |
| | C452 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C453, 454 | ELECTR. CAPACITOR | CEEANP010M50 |
| | C455 | ELECTR. CAPACITOR | CEANP100M25 |
| | C456, 457 | ELECTR. CAPACITOR | CEEANP4R7M25 |
| | C458 | ELECTR. CAPACITOR | CEAS4R7M50 |
| | C459 | ELECTR. CAPACITOR | CEAS2R2M50 |
| | C460 | ELECTR. CAPACITOR | CEAS1R5M50 |
| | C461 | ELECTR. CAPACITOR | CEAS010M50 |
| | C462 | ELECTR. CAPACITOR | CEASR68M50 |
| | C463 | ELECTR. CAPACITOR | CEASR47M50 |
| | C464 | ELECTR. CAPACITOR | CEASR22M50 |
| | C465 | ELECTR. CAPACITOR | CEASR15M50 |
| | C466 | CERAMIC CAPACITOR | CKDYX104M25 |
| | C467 | CERAMIC CAPACITOR | CKDYX823M25 |
| | C468 | CERAMIC CAPACITOR | CKDYX563M25 |
| | C469 | CERAMIC CAPACITOR | CKDYX333M25 |
| | C470 | CERAMIC CAPACITOR | CKDYX223M25 |
| | C471 | CERAMIC CAPACITOR | CKDYX123M25 |
| | C472 | CERAMIC CAPACITOR | CKDYB822K50 |
| | C473 | CERAMIC CAPACITOR | CKDYB472K50 |
| | C474 | ELECTR. CAPACITOR | CEEA102M16 |
| | C475 | CERAMIC CAPACITOR | CKPUYY103M16 |
| | C476 | ELECTR. CAPACITOR | CEAS220M25 |
| | C477 | CERAMIC CAPACITOR | CKDYX563M25 |
| | C478 | CERAMIC CAPACITOR | CKDYX273M25 |
| | C479 | CERAMIC CAPACITOR | CKDYX153M25 |
| | C480 | CERAMIC CAPACITOR | CKDYX103M25 |
| | C481 | CERAMIC CAPACITOR | CKDYB562K50 |
| | C482 | CERAMIC CAPACITOR | CKDYB392K50 |
| | C483 | CERAMIC CAPACITOR | CKDYB222K50 |
| | C484 | CERAMIC CAPACITOR | CKDYB152K50 |
| | C487-496 | MYLOR FILM CAPACITOR | CQMA103J50 |

| Mark | No. | Description | Part No. |
|------------------|------------|---------------------|--------------|
| RESISTORS | | | |
| | R101 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R102 | CARBONFILM RESISTOR | RD1/2PM□□□J |
| | R103-105 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R110-113 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R151-164 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R166-175 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R177, 178 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R201 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R202-205 | CARBONFILM RESISTOR | RDR1/4PM□□□J |
| | R206-219 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R231-234 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R235 | METALFILM RESISTOR | RN1/4PQ□□□□F |
| | R236 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R237, 238 | CARBONFILM RESISTOR | RDR1/4PM□□□J |
| | R239, 240 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R241, 242 | CARBONFILM RESISTOR | RDR1/4PM□□□J |
| | R245-252 | CARBONFILM RESISTOR | RDR1/4PM□□□J |
| | R281, 282 | CARBONFILM RESISTOR | RDR1/4PM□□□J |
| | R283-289 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R301 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R303-307 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R309-311 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R321-329 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R352 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R353 | CARBONFILM RESISTOR | RD1/2PM□□□J |
| △ | R354 | FUSIBLE RESISTOR | RFA1/4PS□□□J |
| | R355 | CARBONFILM RESISTOR | RD1/2PM□□□J |
| | R356, 357 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R358-361 | CARBONFILM RESISTOR | RD1/4PM□□□J |
| | R362-365 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R384 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R401 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R403 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R406 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R410-436 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R437 | RESISTOR ARRAY(22K) | RA8T□□□J |
| | R438 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R451 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R453 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R455, 456 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | R457-462 | CARBONFILM RESISTOR | RDR1/4PM□□□J |
| | R463-478 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| | VR201, 202 | VR | ACP1042 |
| | VR203 | VR | ACP1040 |
| | VR204 | VR | ACP1043 |
| | VR205 | VR | ACP1046 |
| | VR206 | VR | ACP1038 |
| | VR231 | VR | VRTS6VS222 |
| | VR232 | VR | ACP1044 |
| | VR281 | VR | ACP1044 |
| | VR282 | VR | ACP1043 |
| | VR301 | VR | ACP1043 |
| | VR451 | VR | ACP1045 |

| Mark | No. | Description | Part No. |
|---------------|-----|---------------------------|----------|
| OTHERS | | | |
| | | SCREW | ABA-298 |
| | | PIN JACK(2P) | AKB1039 |
| | | TERMINAL 2-P | AKE-060 |
| | | SOCKET | AKX1034 |
| | | FRONT END MODULE ASSEMBLY | AXQ1004 |
| | | AM RF TUNING BLOCK | AXX1011 |
| | | CN101 CONNECTOR(10P) | KPE10 |
| | | CN102 CONNECTOR(12P) | KPE12 |
| | | X301 CERAMIC RESONATOR | ATF1027 |
| | | X321 CRYSTAL RESONATOR | ASS1005 |

X401 CERAMIC RESONATOR ASS1055

◎ POWER ASSEMBLY(AWZ3639)

COILS/TRANSFORMERS

| | | | |
|---|------|-------------------|---------|
| △ | L351 | FILTER | ATF-163 |
| △ | T351 | POWER TRANSFORMER | ATT1154 |

CAPACITORS

| | | | |
|---|------|-------------------|---------|
| △ | C353 | CKA (0.01/AC400V) | ACG1002 |
|---|------|-------------------|---------|

DISPLAY ASSEMBLY (AWP1034)

SEMICONDUCTORS

| | | |
|------------|---------------------|----------|
| IC901, 902 | FL STATIC DRIVER IC | LC7570 |
| Q901 | TRANSISTOR | DTC143ES |
| D901-905 | DIODE | 1SS252 |
| D906, 907 | LED | AEL1072 |

SWITCHES

| | | |
|----------|--------|---------|
| S901-924 | SWITCH | ASG1034 |
|----------|--------|---------|

CAPACITORS

| | | |
|------|-------------------|-------------|
| C901 | CERAMIC CAPACITOR | CKPUY103M16 |
|------|-------------------|-------------|

RESISTORS

| | | |
|-----------|---------------------|-------------|
| R901, 902 | CARBONFILM RESISTOR | RD1/8PM□□□J |
| R905 | CARBONFILM RESISTOR | RD1/8PM□□□J |

OTHERS

| | | |
|------|---------|---------|
| V901 | FL TUBE | AAV1095 |
|------|---------|---------|

FRONT END MODULE ASSEMBLY (AXQ1004)

The component parts of Front End Module assembly (AXQ1004) cannot be supplied.

6. ADJUSTMENTS

6.1 FM TUNER ADJUSTMENTS

- Connect as shown in Fig. 6-1.

6.1.1 FM MONO

| Step | Adjustment name | FM SG (1 kHz \pm 75 kHz dev.) | | | FL display, IF BAND etc. | Location | Adjustment |
|------|----------------------------|---------------------------------|------------|-------------|-----------------------------|-----------------|--|
| | | Frequency | Modulation | Level | | | |
| 1 | T meter adjustment | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | T201-B | Adjust so that the voltage between TP2 and TP3 becomes 0 ± 100 mV. |
| 2 | MONO distortion adjustment | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | T201-A VR203 | Adjust so that the distortion becomes minimum. |
| 3 | Sub-balance adjustment | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | VR208 | Adjust so that the AC voltage at IC201 pin 2 becomes minimum. |

6.1.2 FM STEREO

| Step | Adjustment name | FM SG (1 kHz \pm 75 kHz dev.) | | | FL display, IF BAND etc. | Location | Adjustment |
|------|---|---------------------------------|------------|-------------|---------------------------------------|----------|--|
| | | Frequency | Modulation | Level | | | |
| 1 | VCO adjustment | 108 MHz | OFF | 60 dB μ | 108 MHz | VR231 | Adjust so that the output at TP7 becomes $38 \text{ kHz} \pm 100 \text{ Hz}$. |
| 2 | Pilot cancel | 107 MHz | PILOT ONLY | 60 dB μ | 107 MHz NORMAL | VR232 | Adjust so that the AC voltage at output terminal becomes minimum. (MAX LPF: OFF) |
| 3 | STEREO distortion adjustment (NORMAL) | 89 MHz | L-ONLY | 60 dB μ | 89 MHz NORMAL | VR281 | Adjust so that the distortion becomes minimum. |
| 4 | STEREO distortion adjustment (SUPER NARROW) | 89 MHz | L-ONLY | 60 dB μ | 89 MHz SUPER NARROW | VR282 | Adjust so that the distortion becomes minimum. |
| 5 | Separation adjustment | 89 MHz | R-ONLY | 60 dB μ | 89 MHz NORMAL | VR202 | Adjust so that the separation R \rightarrow L becomes maximum. |
| 6 | | | L-ONLY | 60 dB μ | 89 MHz NORMAL | VR201 | Adjust so that the separation L \rightarrow R becomes maximum. |
| 7 | Noise reduction adjustment | 89 MHz | L-ONLY | 60 dB μ | 89 MHz NORMAL MPX NR: ON/OFF | VR451 | Adjust so that the output level, when ON, becomes $+1^{+0.5}_{-0.1}$ dB when the MPX NR of the main unit is OFF. |

Stereo modulation: Main 1 kHz L+R \pm 68.25 Hz, Pilot 19 kHz \pm 6.75 kHz.

6.1.3 FM ETC

| Step | Adjustment name | FM SG (1 kHz \pm 75 kHz dev.) | | | FL display, IF BAND etc. | Location | Adjustment |
|------|-------------------------|---------------------------------|------------|-------------|-----------------------------|----------|--|
| | | Frequency | Modulation | Level | | | |
| 1 | S meter adjustment | 99 MHz | MONO | 75 dB μ | 99 MHz NORMAL | VR205 | Adjust so that the voltage between TP4 and GND becomes $4.9^{+0.05}_{-0.1}$ V. |
| 2 | Muting level adjustment | 99 MHz | MONO | 12 dB μ | 99 MHz NORMAL | VR204 | Adjust so that the muting is released at the input level shown on the left. |

6.2 AM TUNER ADJUSTMENTS

- Connect as shown in Fig. 6-2.

| Step | Adjustment name | FM SG (400 Hz 30% modulation) | | | FL display, IF BAND etc. | Location | Adjustment |
|------|-------------------------|-------------------------------|------------|-----------------|--------------------------|----------------------|--|
| | | Frequency | Modulation | Level | | | |
| 1 | Tracking adjustment * 1 | 603 kHz | OFF | Low input level | 603 kHz | ANT coil of MW block | Adjust so that the voltage between TP9 and GND becomes maximum. |
| | | 1395 kHz | OFF | Low input level | 1395 kHz | TC101 | |
| 2 | IFT adjustment * 1 | 603 kHz | OFF | Low input level | 603 kHz | F301 | |
| 3 | S meter adjustment | 1008 kHz | ON | 74 dB μ V/m | 1008 kHz | VR301 | Adjust so that the voltage between TP9 and GND becomes 2.5 ± 0.05 V. |

*1: Adjustment only for HIX1B.

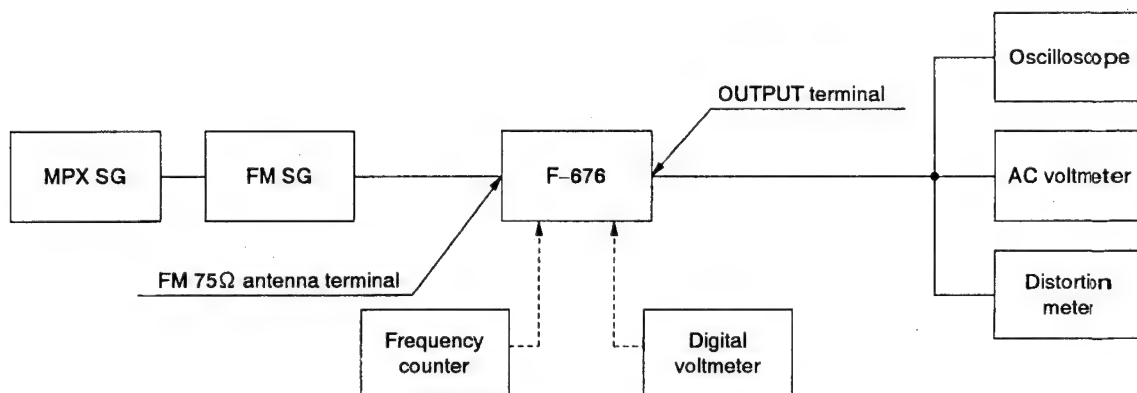


Fig. 6-1 FM Tuner Connection

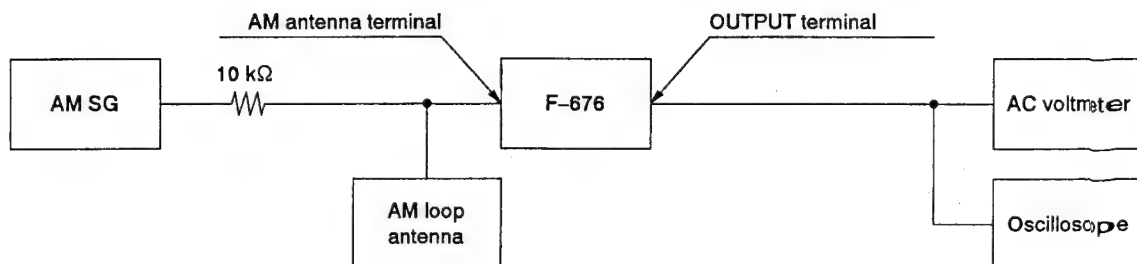


Fig. 6-2 AM Tuner Connection

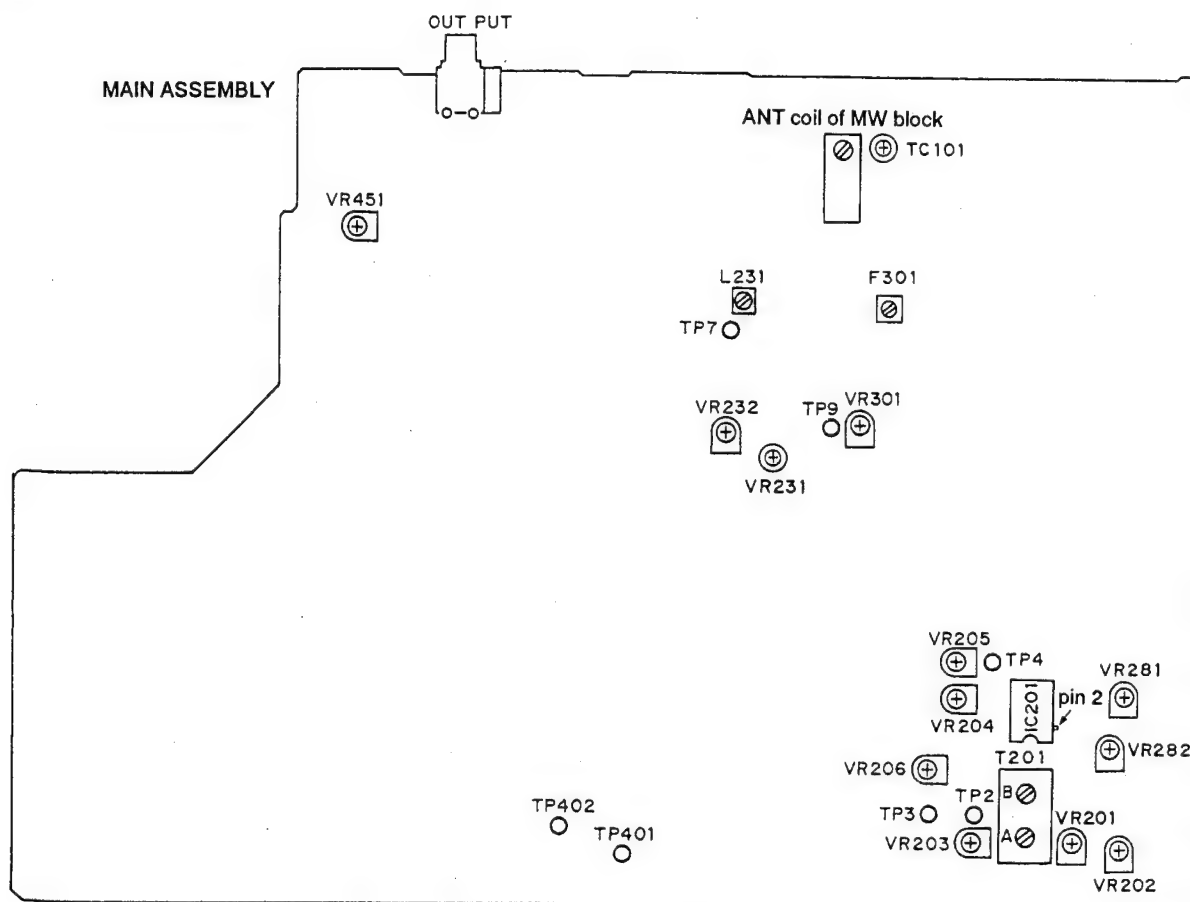


Fig. 6-3 Adjusting Point

6. RÉGLAGES

6.1 RÉGLAGES DU SYNTONISEUR FM

- Raccorder comme indiqué à la figure 6-1.

6.1.1 MONO FM

| Etape | Nom du réglage | FM SG (1 kHz \pm 75 kHz dev.) | | | Affichage FL, GAMME FI, etc. | Emplacement | Réglage |
|-------|-----------------------------------|---------------------------------|------------|-------------|------------------------------|-----------------|---|
| | | Fréquence | Modulation | Niveau | | | |
| 1 | Appareil de mesure en T | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | T201-B | Régler afin que la tension entre TP2 et TP3 soit de 0 \pm 100 mV. |
| 2 | Réglage de distorsion MONO | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | T201-A VR203 | Régler afin que la distorsion soit minimale. |
| 3 | Réglage de l'équilibre auxiliaire | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | VR208 | Régler afin que la tension CA à IC201 Broche 2 soit minimale. |

6.1.2 STEREO FM

| Etape | Nom du réglage | FM SG (1 kHz \pm 75 kHz dev.) | | | Affichage FL, GAMME FI, etc. | Emplacement | Réglage |
|-------|---|---------------------------------|------------|-------------|---------------------------------------|-------------|---|
| | | Fréquence | Modulation | Niveau | | | |
| 1 | Réglage du VCO | 108 MHz | OFF | 60 dB μ | 108 MHz | VR231 | Régler afin que la sortie à TP7 soit de 38 kHz \pm 100 Hz |
| 2 | Neutralisation pilote | 107 MHz | PILOT ONLY | 60 dB μ | 107 MHz NORMAL | VR232 | Régler afin que la tension CA, broches de sortie, soit minimale. (MAX LPF: HORS CIRCUIT) |
| 3 | Réglage de distorsion STEREO (NORMAL) | 89 MHz | L-ONLY | 60 dB μ | 89 MHz NORMAL | VR281 | Régler afin que la distorsion soit minimale. |
| 4 | Réglage de distorsion STEREO (SUPER NARROW) | 89 MHz | L-ONLY | 60 dB μ | 89 MHz SUPER NARROW | VR282 | Régler afin que la distorsion soit minimale. |
| 5 | Réglage de séparation | 89 MHz | R-ONLY | 60 dB μ | 89 MHz NORMAL | VR202 | Régler afin que la séparation D \rightarrow G soit maximale. |
| 6 | | | L-ONLY | 60 dB μ | 89 MHz NORMAL | VR201 | Régler afin que la séparation G \rightarrow D soit maximale. |
| 7 | Réglage de réduction de bruit | 89 MHz | L-ONLY | 60 dB μ | 89 MHz NORMAL MPX NR: ON/OFF | VR451 | Régler afin que le niveau de sortie, quand ON, soit de +1 $^{+0,5}_{-0,1}$ dB lorsque le MPX NR de l'unité principale est hors-circuit. |

Modulation de stéréo: Principal 1 kHz L+R \pm 68,25 Hz, Pilote 19 kHz \pm 6,75 kHz.

6.1.3 ETC FM

| Etape | Nom du réglage | FM SG (1 kHz \pm 75 kHz dev.) | | | Affichage FL, GAMME FI, etc. | Emplacement | Réglage |
|-------|-------------------------------|---------------------------------|------------|-------------|------------------------------|-------------|--|
| | | Fréquence | Modulation | Niveau | | | |
| 1 | Appareil de mesure en S | 99 MHz | MONO | 75 dB μ | 99 MHz NORMAL | VR205 | Régler afin que la tension entre TP4 en GND soit 4,9 $^{+0,05}_{-0,1}$ V. |
| 2 | Réglage de niveau de sourdine | 99 MHz | MONO | 12 dB μ | 99 MHz NORMAL | VR204 | Régler afin que la sourdine soit relâchée au niveau d'entrée indiqués sur la gauche. |

6.2 RÉGLAGES DU SYNTONISEUR AM

- Raccorder comme indiqué à la figure 6-2.

| Etape | Nom du réglage | FM SG (400 Hz 30% modulation) | | | Affichage FL, GAMME FI, etc. | Emplacement | |
|-------|-------------------------------------|-------------------------------|-----------|---------------------|------------------------------|-----------------------|--|
| | | Réglage | Fréquence | Modulation | | Niveau | |
| 1 | Réglage d'alignement * 1 | 603 kHz | OFF | Niveau bas d'entrée | 603 kHz | Bobine ANT du bloc OM | Régler afin que la tension entre TP9 et GND soit maximale. |
| | | 1395 kHz | OFF | Niveau bas d'entrée | 1395 kHz | TC101 | |
| 2 | Réglage du transformateur de FI * 1 | 603 kHz | OFF | Niveau bas d'entrée | 603 kHz | F301 | |
| 3 | Appareil de mesure en S | 1008 kHz | ON | 74 dB μ V/m | 1008 kHz | VR301 | Régler afin que la tension entre TP9 et GND soit $2,5 \pm 0,05$ V. |

* 1: Réglage pour HIX1B seulement.

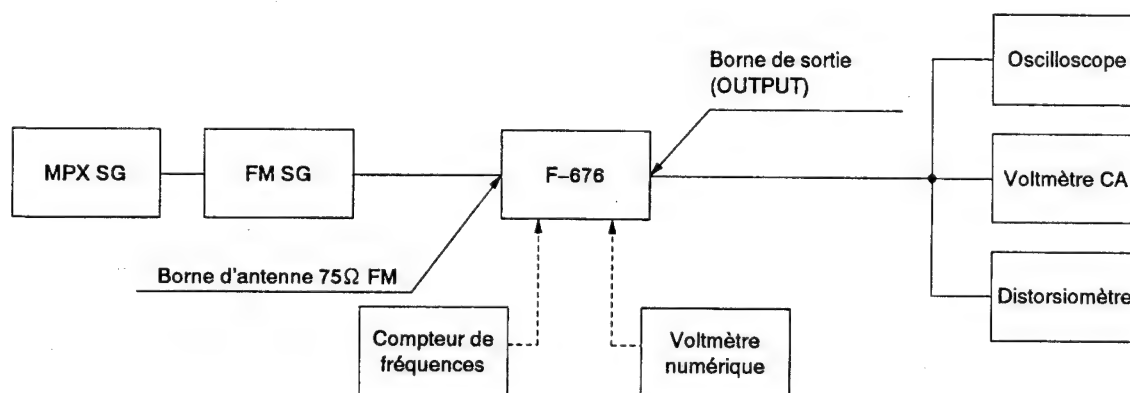


Fig. 6-1 Branchement du syntoniseur FM

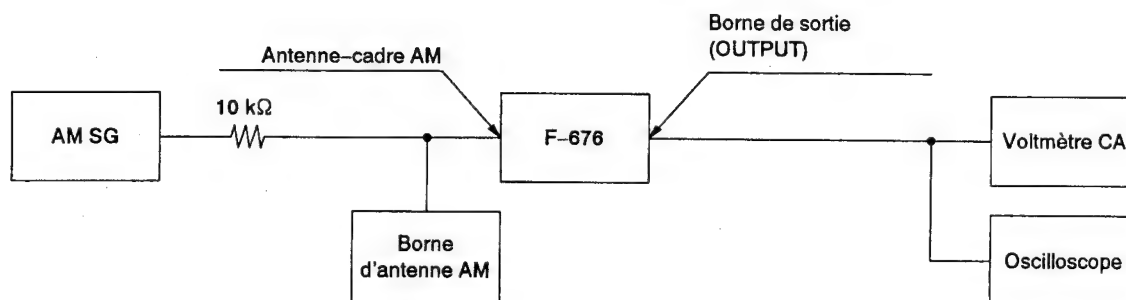


Fig. 6-2 Branchement du syntoniseur FM

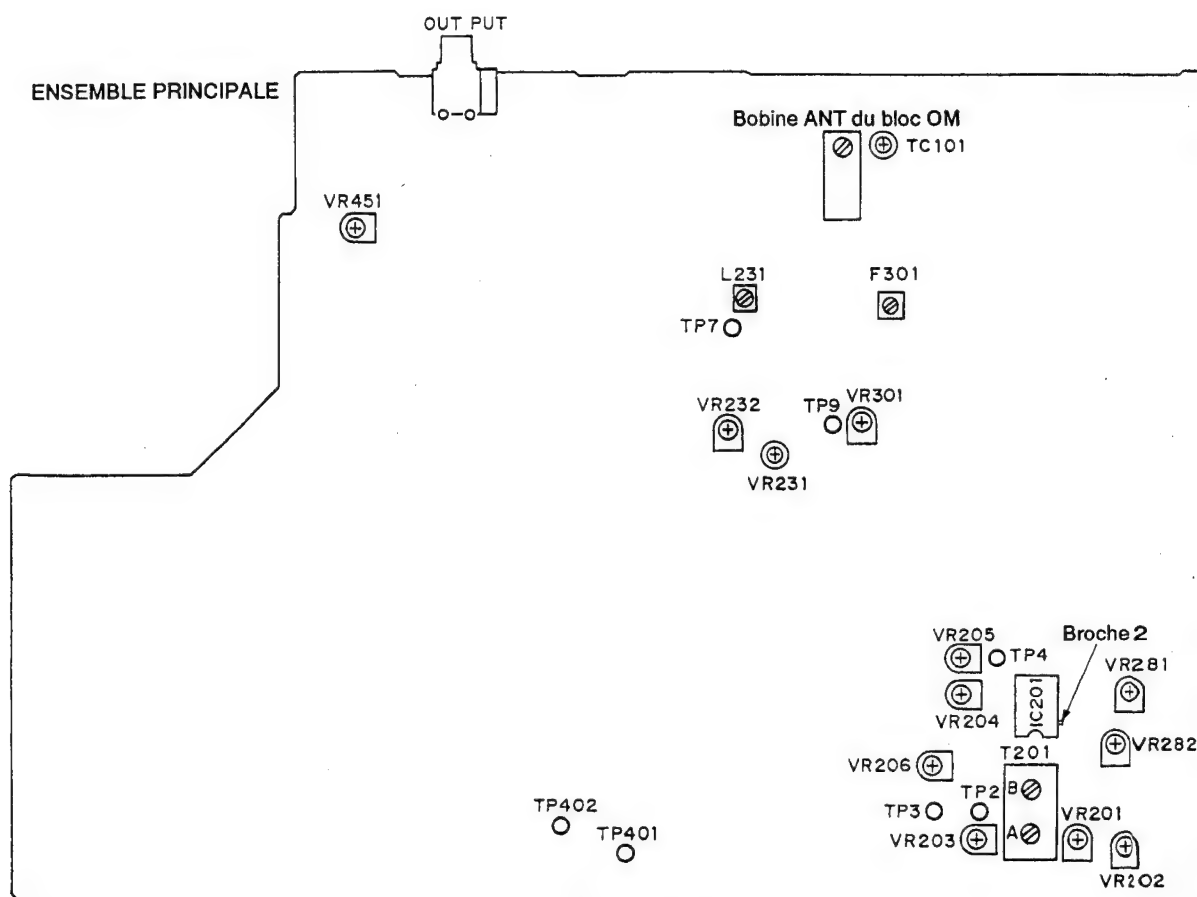


Fig. 6-3 Point de réglage

6. AJUSTES

6.1 AJUSTES DEL SINTONIZADOR DE FM

- Conecte como indica la Fig. 6-1.

6.1.1 FM MONO

| Paso | Ajuste | FM SG (1 kHz \pm 75 kHz dev.) | | | Visualización fluorescente, banda de FI, etc. | Posición | Ajuste |
|------|------------------------------------|---------------------------------|------------|-------------|---|-----------------|--|
| | | Frecuencia | Modulación | Nivel | | | |
| 1 | Ajuste del medidor T | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | T201-B | Ajuste de modo que la tensión entre TP2 y TP3 sea 0 ± 100 mV. |
| 2 | Ajuste de la distorsión monofónica | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | T201-A VR203 | Ajuste de modo que la distorsión sea mínima. |
| 3 | Ajuste del subbalance | 98 MHz | MONO | 60 dB μ | 98 MHz NORMAL | VR206 | Ajuste de modo que la tensión de CA en IC201 patilla 2 sea mínima. |

6.1.2 FM STEREO

| Paso | Ajuste | FM SG (1 kHz \pm 75 kHz dev.) | | | Visualización fluorescente, banda de FI, etc. | Posición | Ajuste |
|------|--|---------------------------------|------------|-------------|---|----------|--|
| | | Frecuencia | Modulación | Nivel | | | |
| 1 | Ajuste del VCO | 108 MHz | OFF | 60 dB μ | 108 MHz | VR231 | Ajuste de modo que la salida en TP7 sea $38 \text{ kHz} \pm 100 \text{ Hz}$ |
| 2 | Cancelación del piloto | 107 MHz | PILOT ONLY | 60 dB μ | 107 MHz NORMAL | VR232 | Ajuste de modo que la tensión de, terminales de salida, CA sea mínima (MAX LPF: OFF) |
| 3 | Ajuste de la distorsión estereofónica (NORMAL) | 89 MHz | L-ONLY | 60 dB μ | 89 MHz NORMAL | VR281 | Ajuste de modo que la distorsión sea mínima. |
| 4 | Ajuste de la distorsión estereofónica (SUPER ESTRECHA) | 89 MHz | L-ONLY | 60 dB μ | 89 MHz SUPER NARROW | VR282 | Ajuste de modo que la distorsión sea mínima. |
| 5 | Ajuste de la separación | 89 MHz | R-ONLY | 60 dB μ | 89 MHz NORMAL | VR202 | Ajuste de modo que la separación R \rightarrow L sea máxima. |
| 6 | | | L-ONLY | 60 dB μ | 89 MHz NORMAL | VR201 | Ajuste de modo que la separación L \rightarrow R sea máxima. |
| 7 | Ajuste de la reducción de ruido | 89 MHz | L-ONLY | 60 dB μ | 89 MHz NORMAL MPX NR: ON/OFF | VR451 | Ajuste de modo que el nivel de salida, cuando ON, sea $+1^{+0,5}_{-0,1}$ dB cuando el MPX NR de la unidad principal esté en OFF. |

Modulación de estéreo: Principal 1 kHz L+R \pm 68,25 Hz, Piloto 19 kHz \pm 6,75 kHz.

6.1.3 FM ETC

| Paso | Ajuste | FM SG (1 kHz \pm 75 kHz dev.) | | | Visualización fluorescente, banda de FI, etc. | Posición | Ajuste |
|------|------------------------------|---------------------------------|------------|-------------|---|----------|--|
| | | Frecuencia | Modulación | Nivel | | | |
| 1 | Ajuste del medidor S | 99 MHz | MONO | 75 dB μ | 99 MHz NORMAL | VR205 | Ajuste de modo que la tensión entre TP4 y masa sea $4,9^{+0,05}_{-0,1}$ V. |
| 2 | Ajuste del nivel silenciador | 99 MHz | MONO | 12 dB μ | 99 MHz NORMAL | VR204 | Ajuste de modo que el silenciamiento se desconecte en el nivel de entrada mostrado a la izquierda. |

6.2 AJUSTES DEL SINTONIZADOR DE AM

- Conecte como indica la Fig. 6-2.

| Paso | Ajuste | FM SG (400 Hz 30% modulación) | | | Visualización fluorescente, banda de FI, etc. | Posición | Ajuste |
|------|----------------------------|-------------------------------|------------|-----------------------|---|-----------------------------------|--|
| | | Frecuencia | Modulación | Nivel | | | |
| 1 | Ajuste del seguimiento * 1 | 603 kHz | OFF | Nivel de entrada bajo | 603 kHz | Bobina de antena del bloque de MW | Ajuste de modo que la tensión entre TP9 y masa sea máxima. |
| | | 1395 kHz | OFF | Nivel de entrada bajo | 1395 kHz | TC101 | |
| 2 | Ajuste del IFT * 1 | 603 kHz | OFF | Nivel de entrada bajo | 603 kHz | F301 | Ajuste de modo que la tensión entre TP9 y masa sea $2,5 \pm 0,05V$ |
| 3 | Ajuste del medidor S | 1008 kHz | ON | 74 dB $\mu V/m$ | 1008 kHz | VR301 | |

* 1: Ajuste sólo para HIX1B.

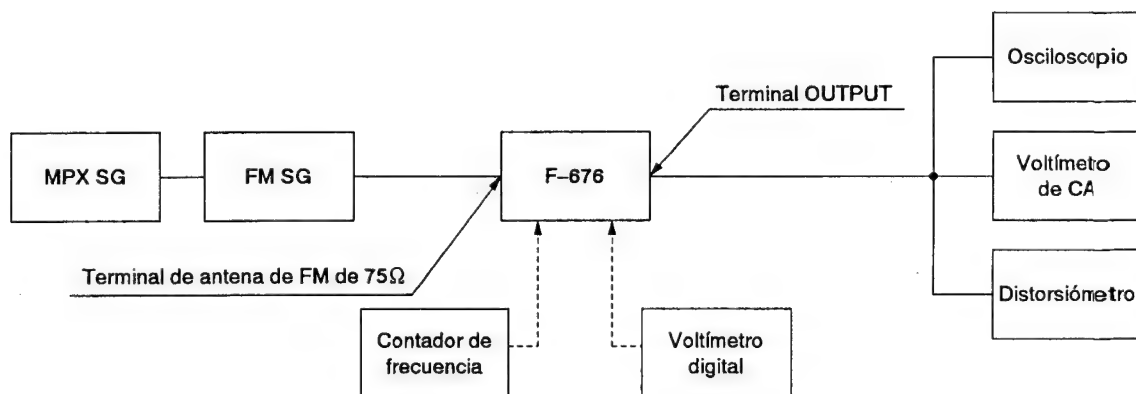


Fig. 6-1 Conexión del sintonizador de FM

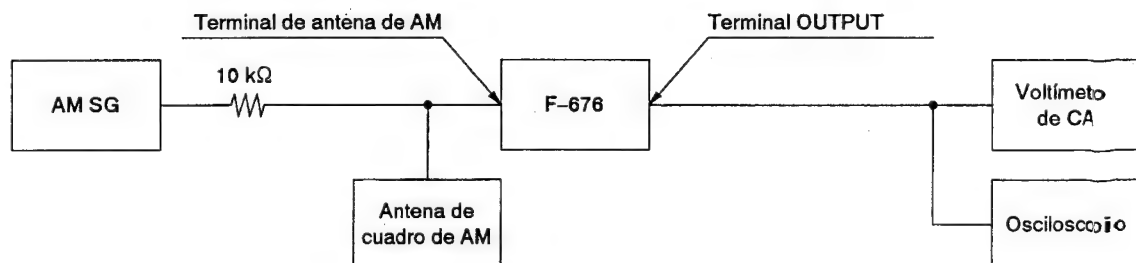


Fig. 6-2 Conexión del sintonizador de AM

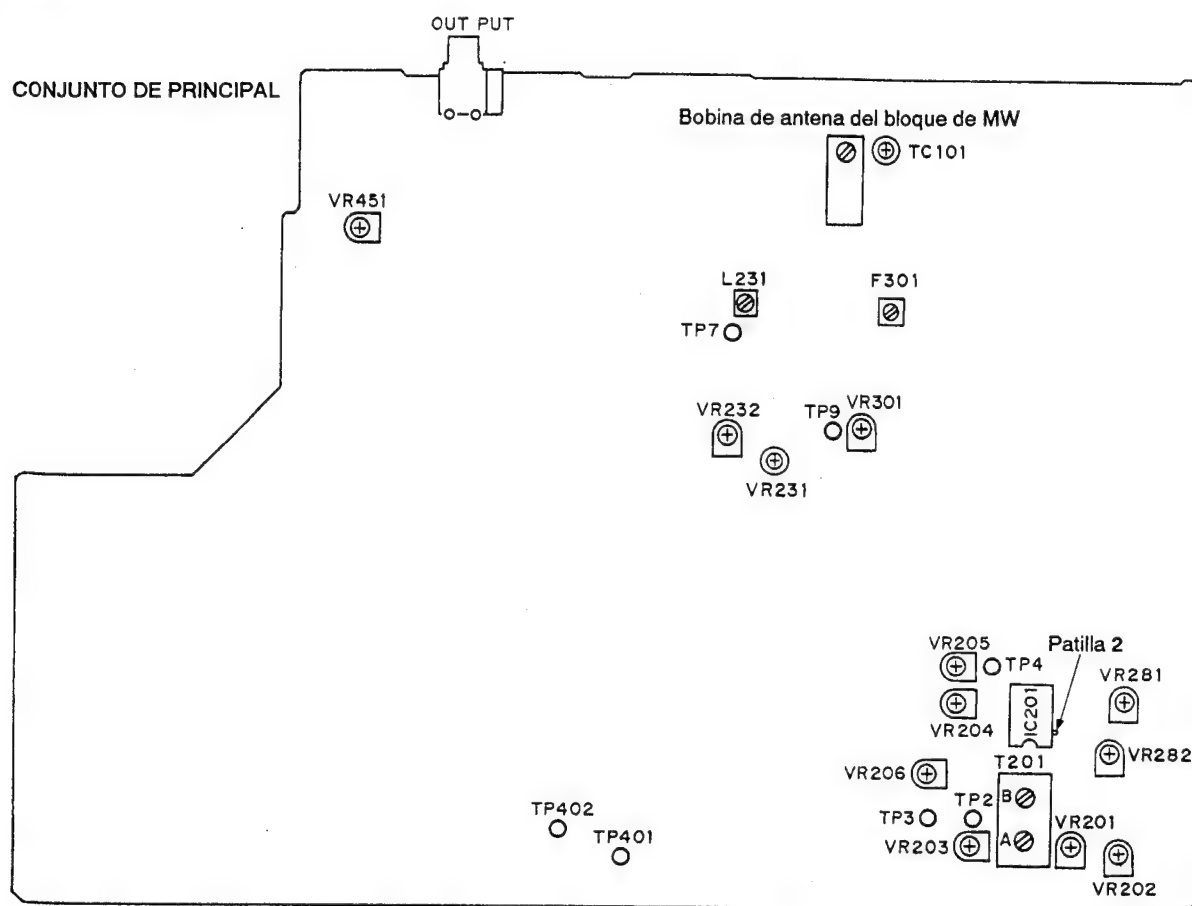


Fig. 6-3 Punto de ajuste

7. FOR F-676/HE, HB AND F-676-S/HEWZ TYPES

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

The F-676/HE, HB and F-676-S/HEWZ types are the same as the F-676/HEWZ type with the exception of the following sections.

| Mark | Symbol & Description | Part No. | | | | Remarks |
|----------|--|---------------------|-------------------|-------------------|-----------------------|---------|
| | | F-676/ HEWZ type | F-676/ HE type | F-676/ HB type | F-676-S/ HEWZ type | |
| ⊙ | TUNER assembly | AWZ3635 | AWZ3636 | AWZ3636 | AWZ3635 | |
| ⊙ | POWER assembly | AWZ3639 | AWZ3640 | AWZ3640 | AWZ3639 | |
| Δ | AC Power cord | ADG1010 | ADG1021 | ADG1085 | ADG1010 | |
| | Station button (1/13/25-6/18/30) | AAD1751 | AAD1751 | AAD1751 | AAD1753 | |
| | Station button (7/19/31-12/24/36) | AAD1752 | AAD1752 | AAD1752 | AAD1754 | |
| | Panel base | AMB1815 | AMB1815 | AMB1815 | AMB1816 | |
| | Front panel | ANB1449 | ANB1449 | ANB1449 | ANB1450 | |
| | Bonnet | AZN1745 | AZN1745 | AZN1745 | AZN1803 | |
| | Screw | ABA1047 | ..... | ..... | ..... |  |
| | Screw | ..... | ..... | ..... | ABA-274 | |
| | Packing case | AHD2053 | AHD2053 | AHD2053 | AHD2054 | |
| | Operating instructions (German) | ARC1263 | ..... | ..... | ARC1263 | |
| | Operating instructions (English/French/Italian/Spanish/ Portuguese/Dutch/Swedish/German) | ..... | ARE1190 | ..... | ..... |  |
| | Operating instructions (English) | ..... | ..... | ARB1313 | ..... |  |

F-676/HE, HB, F-676-S/HEWZ

⊙ TUNER ASSEMBLY (AWZ3636)

The TUNER assembly (AWZ3636) is the same as the TUNER assembly (AWZ3635) with the exception of the following sections.

| Mark | Symbol & Description | Part No. | | Remarks |
|------|---------------------------|--------------|-------------|---------|
| | | AWZ3635 | AWZ3636 | |
| | D108 | 1SV156 | ..... |  |
| | D151-D158 | 1SS85 | 1SS252 | |
| | L101 | LAU2R2M | ..... |  |
| | L102-L104 | LAU470K | ..... |  |
| | L232 | LAU010M | ..... |  |
| | L233, L234 | LAU100K | ..... |  |
| | C102 | CKPUYY103M16 | ..... |  |
| | C110, C112 | CKDYX103M25 | ..... |  |
| | C116 | ..... | CKDYX103M25 | |
| | C206, C217 | CEEA101M16 | CEAS101M16 | |
| | C245 | CEEA102M16 | CEAS102M10 | |
| | C248 | CEEA221M16 | CEAS221M16 | |
| | C249, C250 | CEEA4R7M25 | CEAS4R7M50 | |
| | C101, C253 | CKDYX103M25 | ..... |  |
| | C451 | CEEA221M16 | CEAS221M16 | |
| | C453, C454 | CEEANP010M50 | CEANP010M50 | |
| | C456, C457 | CEEANP4R7M25 | CEANP4R7M35 | |
| | C474 | CEEA102M16 | CEAS102M10 | |
| | R101 | RD1/8PM153J | ..... |  |
| | R102 | RD1/2PM681J | RD1/4PM472J | |
| | R103 | RD1/8PM330J | ..... |  |
| | R114 | ..... | RD1/8PM103J | |
| | R202, R203 | RDR1/4PM103J | RD1/8PM103J | |
| | R204, R205 | RDR1/4PM332J | RD1/8PM332J | |
| | R237, R238 | RDR1/4PM223J | RD1/8PM223J | |
| | R241, R242 | RDR1/4PM333J | RD1/8PM333J | |
| | R245, R246 | RDR1/4PM333J | RD1/4PM333J | |
| | R247, R248 | RDR1/4PM123J | RD1/4PM102J | |
| | R249, R250 | RDR1/4PM821J | RD1/4PM821J | |
| | R251, R252 | RDR1/4PM222J | RD1/4PM152J | |
| | R281, R282 | RDR1/4PM331J | RD1/8PM331J | |
| | R457, R458 | RDR1/4PM821J | RD1/8PM821J | |
| | R459, R460 | RDR1/4PM132J | RD1/8PM132J | |
| | R461, R462 | RDR1/4PM361J | RD1/8PM361J | |
| | Front End Module assembly | AXQ1004 | AXQ1003 | |

⊙ POWER ASSEMBLY (AWZ3640)

The POWER assembly (AWZ3640) is the same as the POWER assembly (AWZ3639) with the exception of the following sections.

| Mark | Symbol & Description | Part No. | | Remarks |
|------|----------------------|----------|---------|---------|
| | | AWZ3639 | AWZ3640 | |
| ⚠ | C353 | ACG1002 | ..... |  |
| ⚠ | L351 | ATF-163 | ..... |  |

8. SPECIFICATIONS

8.1 FEHLERSUCHE (F-676/HEWZ)

UKW-Tunerteil

| | |
|---|---|
| Frequenzbereich | 87,5 bis 108 MHz |
| Nutzempfindlichkeit | |
| NORMAL | Mono: 12,1 dBf, IHF (1,1 μ V/75 Ω) |
| 50 dB Empfindlichkeitsschwelle | |
| NORMAL | Mono: 16,2 dBf, IHF (1,8 μ V/75 Ω) |
| | Stereo: 36,2 dBf, IHF (17,7 μ V/75 Ω) |
| Empfindlichkeit (DIN) | |
| NORMAL | Mono: 0,9 μ V/75 Ω |
| | Stereo: 28 μ V/75 Ω |
| Rauschabstand | Mono: 83 dB (bei 80 dBf) |
| | Stereo: 78 dB (bei 80 dBf) |
| Rauschabstand (DIN) | Mono: 72 dB |
| | Stereo: 65 dB |
| Verzerrung (bei 80 dBf) | |
| NORMAL | Mono: 0,06 % (1 kHz) |
| | Stereo: 0,2 % (1 kHz) |
| SUPER NARROW | Mono: 0,15 % (1 kHz) |
| | Stereo: 0,8 % (1 kHz) |
| Ausweichkanal-Trennschärfe | |
| NORMAL | 80 dB (400 kHz) |
| SUPER NARROW | 80 dB (300 kHz) |
| Stereotrennung | 55 dB (1 kHz) |
| | 40 dB (20 Hz bis 10 kHz) |
| Frequenzgang | $\pm 0,4$ dB (20 Hz bis 15 kHz) |
| Spiegelselektion | 50 dB |
| ZF-Sicherheit | 90 dB |
| AM-Unterdrückung | 60 dB |
| Nebenwellenunterdrückung | 70 dB |
| Hilfsträgerunterdrückung | 55 dB |
| Ansprechschwelle für Geräuschsperrung | 23,2 dBf (4 μ V/75 Ω) |
| Antenneneingang | 75 Ω unsymmetrisch |

8.2 SPECIFICATIONS

FM Tuner Section

| | |
|-----------------------------------|---|
| Frequency range | 87.5 MHz to 108 MHz |
| Usable Sensitivity | |
| NORMAL | Mono: 12.1 dBf, IHF (1.1 μ V/75 Ω) |
| 50 dB Quieting Sensitivity | |
| NORMAL | Mono: 16.2 dBf, IHF (1.8 μ V/75 Ω) |
| | Stereo: 36.2 dBf, IHF (17.7 μ V/75 Ω) |
| Sensitivity (DIN) | |
| NORMAL | Mono: 0.9 μ V/75 Ω |
| | Stereo: 28 μ V/75 Ω |
| Signal-to-Noise Ratio | Mono: 83 dB (at 80 dBf) |
| | Stereo: 78 dB (at 80 dBf) |
| Signal-to-Noise Ratio (DIN) | Mono: 72 dB |
| | Stereo: 65 dB |
| Distortion (at 80 dBf) | |
| NORMAL | Mono: 0.06 % (1 kHz) |
| | Stereo: 0.2 % (1 kHz) |
| SUPER NARROW | Mono: 0.1 % (1 kHz) |
| | Stereo: 0.8 % (1 kHz) |
| Alternate Channel Selectivity | |
| NORMAL | 80 dB (400 kHz) |
| SUPER NARROW | 80 dB (300 kHz) |
| Stereo Separation | 55 dB (1 kHz) |
| | 40 dB (20 Hz to 10 kHz) |
| Frequency Response | ± 0.4 dB (20 Hz to 15 kHz) |
| Image Response Ratio | 50 dB |
| IF Response Ratio | 90 dB |
| AM Suppression Ratio | 60 dB |
| Spurious Response Ratio | 70 dB |
| Subcarrier Product Ratio | 55 dB |
| Muting Threshold | 23.2 dBf (4 μ V/75 Ω) |
| Antenna Input | 75 Ω unbalanced |

MW-Tunerteil

| | |
|---|------------------------------------|
| Frequenzbereich | 531 kHz bis 1.602 kHz (Step 9 kHz) |
| Empfindlichkeit (IHF, Rahmenantenne)..... | 300 μ V/m |
| Trennschärfe | 40 dB |
| Rauschabstand | 50 dB |
| Spiegelselektion | 40 dB |
| ZF-Sicherheit | 50 dB |
| Antenne | Rahmenantenne |

Audioteil

| | |
|--------------------------|---------------|
| Ausgang (Pegel/Impedanz) | |
| UKW (100 % Mod.) | 650 mV/0,9 kΩ |
| MW (30 % Mod.) | 150 mV/0,9 kΩ |

Sonstiges

Netzanschluß..... Wechselstrom 220 – 230 V, 50/60 Hz
Leistungsaufnahme 20 W
Abmessungen 420 (B) x 86 (H) x 316 (T) mm
Gewicht (ohne Verpackung)..... 3,5 kg

Mitgeliefertes Zubehör

| | |
|-----------------------------|---|
| T-förmige UKW-Antenne | 1 |
| MW-Rahmenantenne | 1 |
| Cinch-Anschlußkabel | 1 |
| Bedienungsanleitung | 1 |

HINWEIS:

Änderungen der technischen Daten und des Designs zum Zwecke der Verbesserung vorbehalten.

AM Tuner Section

| | |
|---------------------------------------|-----------------------------------|
| Frequency range..... | 531 kHz to 1,602 kHz (Step 9 kHz) |
| Sensitivity (IHF, Loop antenna) | 300 μ V/m |
| Selectivity..... | 40 dB |
| Signal-to-Noise Ratio | 50 dB |
| Image Response Ratio | 40 dB |
| IF Response Ratio..... | 50 dB |
| Antenna..... | Loop Antenna |

Audio Section

| | |
|--------------------------|-----------------------|
| Output (Level/Impedance) | |
| FM (100 % MOD) | 650 mV/0.9 k Ω |
| AM (30 % MOD)..... | 150 mV/0.9 k Ω |

Miscellaneous

Power requirements a.c. 220 – 230 Volts~, 50/60 Hz
Power Consumption 20 W
Dimensions 420 (W) x 86 (H) x 311 (D) mm
Weight (without package) 3.5 kg

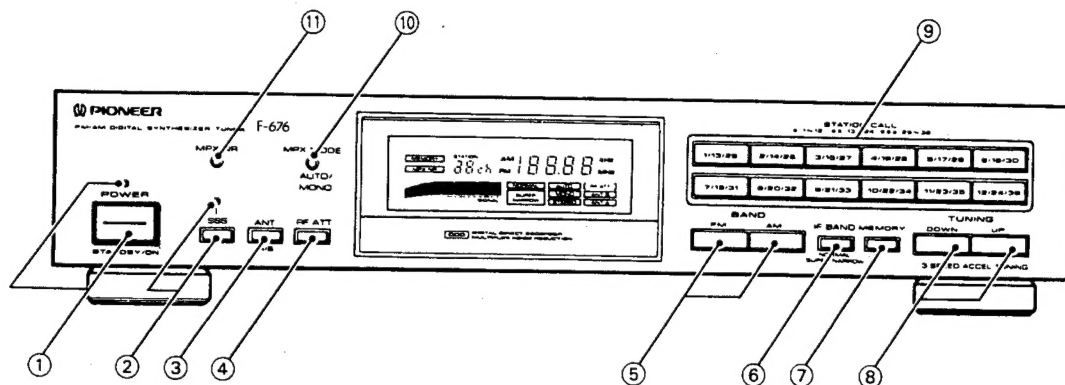
Furnished Parts

| | |
|-------------------------------------|---|
| FM T-type Antenna..... | 1 |
| AM Loop Antenna | 1 |
| Connecting Cord with Pin Plugs..... | 1 |
| Operating Instructions | 1 |

NOTE:

Specifications and design subject to possible modification without notice due to improvements.

9. PANEL FACILITIES



① POWER (STANDBY/ON) switch/indicator

When the power is on, indicator lights.

ON When set to ON position, power is supplied and the unit becomes operational

STANDBY .. When set to STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

NOTE:

- The memory will be backed up so long as the power cord is not unplugged.
- If the power cord is unplugged, the memory will be retained for several days.

② SSS button/indicator

When SSS is on, indicator lights. If turned on during reception of AM or when MPX MODE is set to MONO during FM, this will produce a simulated stereo effect which provides rich ambience. SSS: Spectrum Simulated Stereo.

NOTE:

- This button's status is preset for each station in station memory.
- When the multiplex mode is AUTO, it switches to MONO and operates.

③ ANT A/B button

Selects between two antennas connected to the FM antenna A and B terminals. **ANT A** or **ANT B** indicator lights up.

NOTE:

This button's status is preset for each station in station memory.

④ RF ATT button

Set this button to ON when receiving strong FM signals (nearby stations) to reduce sound distortion ([RF ATT] indicator lights). Normally, this button should be set to OFF.

NOTE:

This button's status is preset for each station in station memory.

⑤ BAND selector buttons

FM:

Press to receive FM broadcasts.

AM:

Press to receive AM broadcasts.

⑥ IF BAND button

Each time this button is pressed the bandwidth of the IF circuit switches between "normal" and "super narrow" for the FM band.

The selected bandwidth is displayed as follows:

The **NORMAL** or **SUPER NARROW** indicator lights up.

Set to SUPER NARROW in case of interference from other stations.

NOTE:

This button's status is preset for each station in station memory.

⑦ MEMORY button

Press to memorize preset stations. The **MEMORY** indicator will remain lit for several seconds. Press the desired STATION CALL buttons to memorize it during this period.

See page 18 for operational details.

⑧ TUNING UP/DOWN buttons

Use these buttons to tune in broadcasting stations. Press UP to receive a station whose frequency is higher than the displayed frequency, and DOWN to tune into a lower frequency station.

⑨ STATION CALL buttons

Use these buttons to preset stations and to receive already preset stations.

⑩ MPX (multiplex) MODE button

Mode changes as follows each time this button is pressed:



This button does not affect AM reception.

AUTO:

Depending on the broadcast station, STEREO or MONO is automatically selected.

AUTO indicator lights up.

NOTE:

When the signal level is too weak for reception, sound output is automatically muted.

MONO:

To receive stereo broadcasts in monaural.

MONO indicator lights up.

NOTE:

This button's status is preset for each station in station memory.

⑪ MPX NR button

When **MPX NR** is on, indicator lights up.

During reception of stereo broadcasts where the signal is weak, set this to ON if noise is a problem. Noise will be suppressed and sound quality will become clearer.

NOTE:

- This button's status is preset for each station in station memory.
- This does not operate during AM signal reception.
- If the multiplex mode is MONO, it switches to AUTO and operates.